THE UNIVERSITY
OF ILLINOIS
LIBRARY

328.7474
N48
1883^5

DOCUMENTS

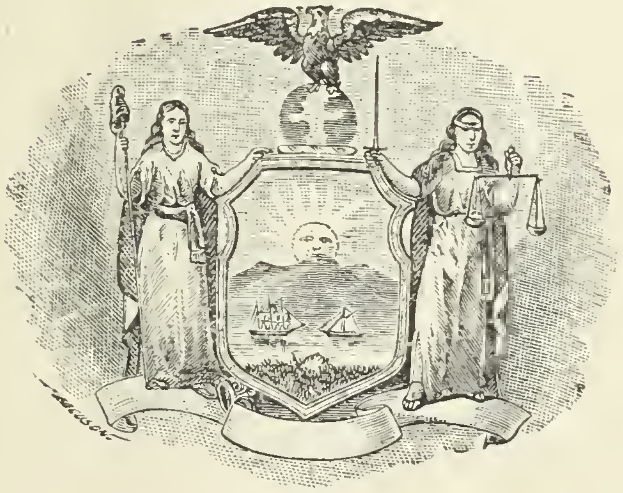
OF THE

ASSEMBLY OF THE STATE OF NEW YORK.

ONE HUNDRED AND SIXTH SESSION,

1883.

VOLUME V.—Nos. 110 to 143, inclusive.



ALBANY:
WEED, PARSONS AND COMPANY, LEGISLATIVE PRINTERS.
1883.

State Board of Health of New York.

THIRD ANNUAL REPORT

328.7474
N48
1883

OF THE

STATE BOARD OF HEALTH

OF

NEW YORK.

TRANSMITTED TO THE GOVERNOR, MARCH 8, 1883.

ALBANY:
WEED, PARSONS AND COMPANY, PRINTERS.
1883.

273268

Digitized by the Internet Archive
in 2018 with funding from
University of Illinois Urbana-Champaign Alternates

https://archive.org/details/documentsofassem1065newy

STATE OF NEW YORK.

No. 110.

IN ASSEMBLY.

March 12, 1883.

STATE OF NEW YORK:

Executive Chamber,
Albany, *March* 12, 1883.

To the Legislature;

I have the honor to transmit herewith the Third Annual Report of the State Board of Health.

GROVER CLEVELAND.

THE STATE BOARD OF HEALTH OF NEW YORK.

MEMBERS OF THE BOARD.

State Commissioners of Health; appointed by the Governor and Senate.
ERASTUS BROOKS, West New Brighton, Richmond Co.
J. SAVAGE DELAVAN, M. D., Albany.
ELISHA HARRIS, M. D., New York, P. O. address, Albany.

Appointed by the Governor from the Health Commissioners in Cities.
EDWARD M. MOORE, M. D., Rochester.
PROF. CHARLES F. CHANDLER, Columbia College, New York.
JAMES G. HUNT, M. D., Utica.

Ex-Officio Members.
WM. M. SMITH, M. D., Health Officer of N. Y., Quarantine, S. Is'd.
JAMES T. GARDNER, Sup't of State Survey.
LESLIE W. RUSSELL, Attorney-General.

OFFICERS OF THE BOARD.

President.
DR. EDWARD M. MOORE, Rochester.

Secretary.
DR. ELISHA HARRIS, Central Office of the Board, Albany.

State Superintendent of Registration and Vital Statistics.
DR. ELISHA HARRIS, as Secretary of the Board.

CONTENTS.

	PAGE.
General Report of the Board	1– 64
List of Standing Committees of the Board	65
Abstract of the Minutes and Transactions of the Board	66– 79
Report of the Executive and Finance Committee	80– 84
Report of the Sanitary Committee	85–108
Report of the Standing Committee on Registration and Vital Statistics	109–120
Report of the Standing Committee on Public Institutions	120–127
Report of the Committee on Quarantine	127–156
Report of the Standing Committee on Drainage, Sewerage and Topography	156–241
Report on Prevalent Diseases	241–262
Report on Repressing and Preventing of Contagious Diseases; and on Contagious Disease-Refuges and Temporary Hospitals	262–272
Memorandum upon Vaccination and the maintenance of Vaccine Virus	273–282
Sanitary Inspection of Emigrant trains and Immigrants passing through the State	282–285
Report of Special Committee on Effluvium Nuisances	285–295
Sanitary Government. Principles and Facts	295–302
The Permanent Series of Sanitary Documents	303–369
Index	371–374

REPORT.

To His Excellency GROVER CLEVELAND, *Governor of New York :*

SIR — The State Board of Health presents, in its third annua report, a brief statement of its transactions, and an account of the work performed under its supervision and of the progress in organization and service of local sanitary authorities.

The law under which this Board was created specified certain duties of first importance, in the nature of sanitary inquiry and advice, and of coöperation with local authorities, the exchange of information with, and giving of aid to them, and the acquirement of information and the registry of records relating to health, diseases and mortality. These duties have continued to receive attention, while under the several laws which the Legislature has since enacted for the preservation of the public health various additional requirements have been laid upon this Board. These duties are very clearly defined and guarded in the several laws by which they are imposed, and they alike emphasize the spirit and purposes of the organic act of 1880 that has shaped the work thus far undertaken.

As shown in the first and second annual reports, this Board has, from the first, regarded the successful local sanitary service by boards of health in towns, villages and cities as the most essential step toward any general and permanent sanitary improvement and well-regulated public health service. For this reason the amendment and harmonizing of the general law for the preservation of the public health, as completed by the Legislature in 1881 and 1882, is regarded as giving a good foundation for a correct and popular system of local sanitary government throughout the State. Under this amended general law every town and city must have a local board of health ; and every incorporated village is likewise authorized to have its local board, under conditions that shall keep it free from incompetent interferences ; and, when a village board of health is so organized and acting, the town and village expenses for the public health service become entirely distinct, and the two boards are incited to an efficient and economical administration of their clearly-defined duties within their respective jurisdictions.

To the local boards of health, under the amended laws, has been transferred the responsibility and authority for enforcing complete registration of vital statistics, under the supervision of the State Board. This became necessary in view of the indispensable importance of constant sanitary watchfulness over the causes and circumstances of mortality, the adoption of protective measures against infectious diseases, the sanitary regulation of burials and the transit of remains of the dead by public carriers. The immediate registry of births is regarded as a sanitary duty. The records of marriages could not, under existing statutes, be conveniently separated from other branches of vital statistics. The local registry clerk has other relations to the local government, and, therefore, does not increase the usual list of local officials. In all respects the general statute for the preservation of the public health, as now administered by local boards, with advice and coöperation given by the State Board, is proving to be a beneficent, acceptable and economical basis of local sanitary government. The organization and maintenance of the local boards of health and their systematic service enables every community to acquire and apply the most essential kinds of sanitary knowledge and the means for protecting and improving the public health; while through the agency of these boards and the enlightened interest which they awaken, each and all of the communities in the Commonwealth may now derive benefit from the State Board of Health. This is being daily exemplified in the Board's service. Its greatest benefits are most widely extended at the least cost and with only a minimum of interference, and yet with any necessary support of local action when required. The apprehensions expressed by many worthy citizens, at first, that the State Board was not endowed with adequate authority in the great work confided to it, are now believed to be groundless, especially as the executive orders of Governor, based upon the investigations and conclusions of this Board, are faithfully complied with. Examples of the practical operation of this feature of the organic law in this service are given in a subsequent section of this report.

Certain new duties which have devolved upon the Board under the Act for Preventing the Adulteration of Food and Drugs (chapter 407 of the Laws of 1881), and under the Act for Regulating the Safety-standard and Testing of Illuminating Oils (chapter 292 of the Laws of 1882), are described and also illustrated in numerous chapters by expert chemists in the appendix of this report. It is due to the public as well as to this Board to state, in this place, that all the procedures and a great amount of scientific investigation, pursued in obedience to these two new laws, have been ordered and pursued with all the prudence, justice and conscientiousness possible, and as regards the expenditures upon these added duties the business accounts of the Board are so kept that the cash expenses upon each of them are separately exhibited in the monthly and the annual statements by the finance committee and in the office accounts.

SUBDIVISIONS OF THIS REPORT.

The Public Health and Prevalent Diseases in the State during the past year.

Vital Statistics of the State.

The Local Boards of Health and the Practical Operation of the Amended Sanitary Laws relating to them.

Work of the Board on Appeals from Citizens and Local Boards, and as required in the cases referred to the Board by the Governor.

Results of Procedures under section eight (8) of the State Board of Health Law.

Results of Sanitary Drainage as aided by the State appropriation in 1881 to drain the swampy beds of certain abandoned canals.

Financial Statement — Expenditures and Resources of the Board.

The Law to Prevent Adulteration of Food and Drugs (chapter 407, Laws of 1881).

The Law to Prevent the Dangerous use of Explosive Illuminating Oils (chapter 292, Laws of 1882).

School Hygiene.— Progress of Efforts to Promote Health in the Schools.

Malaria and the Miasmatic Diseases.

Sanitary Surveys and Maps.— Drainage and Drainage-Areas.

Sewers and the Sewerage Problems in the large villages and small cities.

House Drainage and Sewerage; and the Sanitary Problems of House Plumbing.

Tenement Sanitation and the Sanitary Regulation and Supervision of Tenement Houses.

The Protection of Health and Life in Railway Traveling.

The State Quarantine System and the Sanitation of Emigrant Ships and Emigrant Trains. Contagion and Vaccination in the movement of Emigrants from Europe.

The Small-pox Scourge — The Public Duty and Provision of Vaccination. Bovine Virus and the Public Health Duty concerning it.

Certain improvements of Laws needed.

Conclusions and Recommendations.

THE PUBLIC HEALTH AND PREVALENT DISEASES IN THE STATE IN 1882.

The general health of the people throughout the State the past year has gained by the unusual and almost universal prosperity of their industrial pursuits, the abundance of the best food products, and the increase of domestic improvements.

Other circumstances which are steadily contributing to the means of health and the protection of life will here be mentioned, yet there is such ample evidence that the industry and thrift which prevent want and provide for improvements and comfort of homes and people that these are worthy of prominent recognition wherever found; and especially, as the absence of them will be conspicuously noticeable among vast numbers of the more unfortunate classes that not only suffer excessively and feel the heaviest pressure of mortal diseases, but in turn most perilously, themselves endanger the public health. It is a grave fact that among the 5,200,000 and upwards of the people in this State there are probably nearly 1,000,000 whose dwellings and physical conditions invite and often propagate diseases. In these unthrifty classes which abound in the large cities, their records of sickness and mortality show where and why there has continually been great need of safeguards for the public health.

In the midst of abundance and prosperity, as well as in the dwellings of the least favored, a very few diseases the past year have caused fully one-half of all the deaths in the State. These few are admitted to be the most preventable and untimely causes of mortality; yet the very names of them are household words, and until recently these diseases were mostly regarded as inevitable. As it is with these that the local sanitary authorities and the State Board are required to deal with considerable power of interference, this Board has organized such methods of procedure, and such safeguards as seem now most practicable, and has endeavored to incite such sanitary activity and improvements as will most successfully reach and control the physical circumstances which make up the avoidable or preventable causes of these evils. In this endeavor the masses of the people had, in the first place, to become interested and earnestly enlisted. The thorough organization of local sanitary boards, under general laws, has, consequently, been a paramount duty, and this has already resulted in enlisting a great proportion of intelligent citizens and their families in a true self-concern for such matters and for speedy and effectual application of ways and means of defense against the preventable sources of destructive diseases.

THE ACUTE INFECTIOUS OR CONTAGIOUS DISEASES.

Early childhood suffers the heaviest losses by infectious diseases. Diphtheria, scarlet fever, small-pox and measles, the chief of these are destructive at all seasons and in country and cities alike, yet in the denser populations, as in New York, Brooklyn, Albany, Troy, Buffalo and the large manufacturing villages, the specific contagion as well as contributing conditions of causation will not as readily be exterminated as in rural communities. In the latter during the past year there have been fewer outbreaks and epidemics from these maladies than in the previous two years, but in some of the large cities they have been unusually fatal and prevalent. No exotic contagions, except small-pox, have seriously added to the common dangers ever present from these diseases in various parts of the State. The occasional outbreaks of small-pox in the metropolitan district and at Buffalo, in and about the lodging-places where recently arrived emigrants were congregated, have amply shown the necessity for all the sanitary care given to this source of danger by both State and National authorities. Important evidence on this subject, and concerning the means by which each of the controllable kinds of prevalent contagious diseases are spread, will be given in subsequent sections of this report.

Diphtheria.— The persistent prevalence of this disease in the cities and many of the populous villages is inciting more exact and comprehensive investigation of its essential nature and the causes that propagate and perpetuate it. Its ravages are so relentless and sudden ; its fatality so excessive, even where life and domestic health are supposed to be most secure ; and the total losses by this one destroyer are so enormous, that no efforts have been spared by the State Board of Health to induce and aid the organization of the best known sanitary measures to repress the causes and spreading of this malady. After two years, the experience and testimony of this Board and many of the best local health authorities in the State fully warrant the belief that progress is being made in the successful application of sanitary means which repress and limit the prevalence and fatality of this malady.

Of course, there will be occasional resistance against the best sanitary measures, and there must continue to be more or less medical skepticism in regard to particular factors in the propagation and spread of the disease until the nature of the contagious attribute of it is indisputably established; but the public health officers who, with only the existing light they have, should fail to advise and organize sanitary precautions against both the contagious and the contributing causes of diphtheria could not be acquitted of the charges of incompetency and unfaithfulness. Even the few physicians who continue to disregard the necessary sanitary duties in this matter find themselves arraigned before the highest standard of medical judgment. This Board has secured the attention and almost unexceptional adherence of local sanitary authorities to the duty of requiring the proper isolation or domestic quarantining of the sick; and, at the same time, of diligently searching out all local circumstances by which the disease has begun its course or is spreading.

The total mortality by diphtheria in the State cannot yet be told. The most accurate statistics at hand show that in several of the cities about six deaths in every one hundred from all causes are charged to diphtheria. The two cities of New York and Brooklyn, in 1881, buried 3,410 dead from this disease. This is about six per cent of the total mortality from all causes in those cities. In smaller communities, as in certain hamlets and mountain and hill towns mentioned in the former reports, this cause of death has been equal to twenty-five, thirty and forty per cent of the total by all causes. So, also, in separate families, wherever this scourge prevails, it often occurs that more than half of the members, sometimes all in large groups of children, perish from it.

Scarlet fever.— The total mortality from this disease, as reported, seems to be equal to that from diphtheria. Its prevalence is generally more widespread in the State than any other disease that requires quarantining and disinfection. The beneficent results of the regulations adopted by local boards of health to secure complete isolation of sick, the disinfection of premises and material, and the systematic protection of the public schools against their special exposure to the introduction of its contagion, are already being witnessed very extensively. There has been a great increase of saving knowledge among the masses of the people in regard to the duty of completely isolating the sick of this disease and thoroughly disinfecting all known sources of its contagion. There still are witnessed occasional attempts to discredit this duty by voluntary advisers in the towns and villages where an incompetent practitioner among the people denies the fact that scarlet fever is contagious, while he advises or organizes opposition to the sanitary rules and duties that would treat it as being a dangerously infectious disease. Happily such local controversy has, in every instance, resulted in the voluntary popular support of the local sanitary authority. The last of all the objections to sanitary rules and interference in regard to this matter, as much with reference to diphtheria as to scarlet fever, related to the sanitary impropriety of public funerals and the prohibition of exposure to the unburied remains of the dead. Nearly every board of health in the State has deliberately adopted and enforced the necessary rules to prevent these dangerous practices. Local opposition has ceased. The prudence and firm convictions of sanitary officers have won this success, aided by the press and the State Board of Health. The extermination of scarlet fever from school-rooms, by rules of exclusion of all attendants from families and dwellings where it has begun to appear, and by the complete disinfection of apartments and materials that have been exposed to the sick, is the published rule of public duty throughout the State.

Measles and whooping-cough. — Though these two most common maladies of children are charged with a great number of deaths, their fatality is chiefly certified as resulting from the pulmonary disorders which they induce. Healthfulness of habitations, and a reasonable avoidance of public exposure of the sick with these spreading diseases—now generally advised by medical and school officers—appear to meet the sanitary requirements for repressing their prevalence. The most fatal results of these two maladies reported during the year were in crowded asylums for young children where no adequate means were present for removing the sick from the other inmates. It is worthy of a record by this Board that in certain large country homes, with extensive grounds and numerous buildings for the care of city asylum infants and children, the prevalence and fatality of measles and whooping-cough have been controlled with marked success by the sanitary measures which are now being recommended by local boards of health.

Small-pox in the State. — During the year there has not been an instance in which an outbreak of this contagious pest has not been subjected to sanitary control by the local health authorities, as soon as the State Board obtained the facts upon which procedures could be advised or ordered. This statement relates to all other communities than the cities which have adequate health ordinances and means at hand to meet their sanitary necessities. Experience is proving that prompt and complete quarantining of small-pox is not resisted in any community where there is a competent health officer and a well-organized board of health. The dread of this loathsome contagion induces a ready compliance with the most essential sanitary rules.

In each of its previous annual reports this Board has briefly reviewed its experience and records of coöperation with the local sanitary authorities in the warfare upon small-pox. During the year and a half to which those reports relate, at the beginning of local organization of sanitary duties, the chief source of delay and uncertainty of adequate control of contagion as well as of providing for general vaccination consisted in the defect or the absence of local sanitary authority. This difficulty is, at least, overcome, and, under the amended general health law, the ordinary town board of health vies with the boards of cities and large villages in promptness and efficiency whenever small-pox is reported or general protection by vaccination and revaccination is advised.

While it is probably true that no State in the Union, during the past year, escaped this dreaded disease more generally than New York, still it was reported to this Board from sixty localities, and in upwards of one hundred and fifty different houses, besides being almost constantly present in Brooklyn, Long Island City and New York. The distribution of these outbreaks was very widespread, extending from the east end of Long Island to the western frontier of the State.

In all of the sixty places here referred to, the local sanitary authorities promptly put themselves in communication with the State Board, adopted strict measures of isolation of the sick and resorted to systematic vaccination. By these means the spread of the contagion was promptly arrested, and the number of fatal cases kept at a minimum.

The utility of vaccination has never been more significantly demonstrated than in the experience of local boards of health in this State during the past year. The importance of having at hand pure and trustworthy vaccine virus for public and private uses, ever ready for instant demands for it by telegraph and mail, has been proved in most, if not all, of these sixty outbreaks above mentioned.

The first outbreak of importance was reported at the beginning of 1882 from the Soldiers and Sailors' Home, Bath, Steuben county, where late in November, 1881, a new inmate was admitted who proved to be infected with small-pox. Dr. Wylie, the surgeon of that institution, reported upon that outbreak, as follows: "About the time mentioned in complaint, there was a man admitted to the Home, recently from the city of New York, who, a few days after admission, broke out with marked varioloid symptoms. The man was immediately isolated from the inmates, and well taken care of by a competent nurse.

"The inmates were at once quarantined, and recent bovine crusts were obtained by telegraph from the drug-house of Frazar & Lee, of New York city; and all of the inmates were thereupon immediately vaccinated by myself, with the assistance of Dr. Cruttenden, of Bath, with excellent results.

"It is true, many had sore arms, not more so, however, than usually occur. Not a single case of a serious character was known to exist, and I am happy to state that, by prompt and thorough action by the managers of the Home, serious results were avoided, as there was no spreading of the disease in this vicinity." (A full account of this matter is given in a subsequent chapter.)

During the last week in December, 1881, the remains of two brothers who had died of small-pox at the pest refuge on Blackwell's Island, a few months previously, were, after burial in the town of New Lots, Kings county, conveyed through the cities of Brooklyn and New York in an improper manner, and placed in a baggage car for transportation by the N. Y., L. E. & W. R. R. to Wellsburgh, Chemung county. On the 9th of January the local sanitary authority at Wellsburgh, the health officer at Elmira, and the village authorities of Hornellsville brought this dangerous act to the attention of the State Board of Health, and it became the occasion for adopting stringent regulations and specific instructions to all railway and express carriers concerning the transportation of the dead from contagious diseases. Immediate vaccination and the effectual disinfection of every thing exposed put an end to the danger that had then been incurred.

In the town of Catskill, a case of small-pox occurred which led to the adoption of vaccination and re-vaccination throughout all the public schools, and generally throughout the families in that town. The returns of the local health officer show that there were 3,488 persons vaccinated in a total population of about 8,000. The result has been that for a period exceeding one year, that town has remained free from small-pox though its population has been far more exposed than the average population of the State. This sanitary work was performed in accordance with the law relating to vaccination of school children, and the regulations of the local boards of health.

During the last of the year 1881, and early in the winter nearly twenty cases of small-pox occurred in the city of Lockport. All except one were traced to the house of an undertaker, whose wife died of small-pox which was falsely reported by a less alarming name. In a few weeks the population was thoroughly protected by vaccination, at a cost a little less than $4,000. A contagious disease refuge became one of the useful means of limiting the spread of the disease and at the same time furnishing a suitable house of recovery.

In the city of Rochester, during the prevalence of small-pox at Lockport, and with inter-communication almost every hour, there occurred four limited and vigilantly guarded outbreaks. The first two were traced directly to infected persons arriving from Chicago. The city health commissioners immediately organized an efficient vaccinating corps, assigning to each vaccinator a definite district. The several vaccinators, together, soon brought in an account of 25,141 vaccinations, 9,188 being at the public schools, 2,110 being among factory operatives, vaccinated at their places of labor, and 13,843 being house-to-house vaccination. These 25,141 exhibit simply the gratuitous service of the municipal board of health. Only $7,133.20 was expended upon this free service. The average cost was about twenty-nine cents for each person vaccinated. The result was such as to secure entire immunity of the business interests as well as of the vastly greater interest of life in that city. It is said that the city received a commercial benefit fully equal to $1,000,000 by being thus protected against alarm and danger.

In the village of Canajoharie, a commercial traveler who was lodging at the largest hotel, and though suffering from a light attack of varioloid, he spent the evening socially, and next morning received the attention of a barber in his shop. The lady in his company the previous evening, and the barber who served him in the morning, both in the hotel, became victims of the contagion, and in time communicated it to others. Delay and insufficiency of official measures for the protection of the community cost many lives and occasioned great injury to business interests. No less than twenty cases, and six separate notifications of fresh outbreaks, all traced to the commercial traveler, were communicated to the State Board. At last vaccination and re-vaccination extinguished the material upon which the contagion was burning its way through the township.

Early in June a case of small-pox occurred in the town of Rhinebeck, which was traced to the corpse of a child, unlawfully brought into that town from Jersey City. The contagion began to spread, when strict quarantine and general vaccination put an end to it.

During the month of June small-pox appeared among "rag-sorters" employed in a paper mill in South Glens Falls (town of Moreau), and cases were found among these employees at Sandy Hill, town of Kingsbury, and in the village of Glens Falls in the town of Queensbury, on the opposite side of the river from Moreau, which is on the west side. The boards of health in those towns and villages, respectively, acted promptly and effectually. Vaccination soon entirely suppressed the progress of the contagion, the sick meantime having been quarantined rigorously.

On the 22d of June, the canal boat "Caroline" left Buffalo bound to New York harbor and Newark, N. J., having a driver, who was at that time complaining, and who soon became covered with small-pox. Sunday night, four days afterward, this man with small-pox was put off on the "berme" bank when the boat was near Bushnell's basin, east of Rochester.

Wandering onward until he reached Pittsford, the local authorities informed the State Board of Health, and after providing for the dangerously sick man, searched for the canal boat. The Secretary of the State Board, aided by the Superintendent of Public Works, found that the boat was near Utica; Health Officer, Dr. James G. Hunt, of that city, a member of this Board, acted on a general request of the secretary to arrest the boat and all its appurtenances, and place the same under the strictest sanitary regulations of that city. This was effected that night, and before business hours the subsequent morning the boat was towed into an isolated place, and kept under sanitary control until all sources of contagion were thoroughly disinfected and all persons on the craft vaccinated. The master and men of the barge made no secret of what had occurred. Their own statement of the facts is conclusively in evidence of the necessity for maintaining the efficient activity of the local boards of health, and their regulations for general vaccination, as well as a readiness at all times to deal with such danger as the barge Caroline had stealthily cast upon the berme bank of the Erie canal near Pittsford, and also transported in her floating cabin.

Numerous instances of prompt and successful action by local boards of health in the suppression of small-pox, and the public offering of vaccination will be presented in a subsequent section, and also in one of the appended records by the Secretary. That of latest date must here be referred to. It is important to the traveling public as well as to every community, and is briefly as follows:

On the 9th of November, as an express train (No. 8) from Cincinnati, Ohio, approached the Hornellsville station on the New York, Lake Erie and Western railroad, the Medical Inspector of Emigrant Trains (employed by this Board) was beckoned by the conductor of the express to enter one of the saloon cars. A passenger in an advanced stage of small-pox eruption was there found sitting unconcernedly. The instant stampede of the crowd of passengers was followed by seclusion and withdrawal of the infected car and passenger, and an immediate telegraphing, which secured speedy official instructions from the Secretary of the State Board, also a telegraphed request to the authorities at Elmira to hold the train until all exposed passengers and train men should be vaccinated at that station.

The events which ensued are not ended, at the time of this report, except as they relate to certain dead victims of the contagious poison in the car where the Cincinnati patient was found.

The sick traveler kept his seat in the abandoned railway coach a few hours until the pest refuge, two miles out of the village, was opened and prepared for him. He received ample care, but died November 24. The train attendant and fireman, Mr. Ray Robinson, at the railroad station, took fuel and water into the detached and quarantined car soon after the train moved toward Elmira. This train attendant hastened away, yet only to be in turn a victim, twelve days later, and soon died of malignant small-pox. The car was sealed up and kept saturated with disinfecting gases until November 15, and as none who subsequently cleaned and renovated the upholstery, etc., suffered any harm, it was again, after a time, returned to service.

Next, after thirty-two days ensued a series of events which has not ended at the time this report is being written. A lady upwards of ninety years of age, who, in the exciting stampede from the infected car at Hornellsville, had hastily packed up her personal wraps and alighted from the train at Elmira about an hour after being transferred from the infected atmosphere of the sick passenger, behind whose seat in the car she sat. On the evening of the same day she arrived at the house of one of her younger sons in the town of Hector, Schuyler county, who, with his family, had been well vaccinated. Some days subsequently she went to the house of her eldest son, M. S. Compton, a man upwards of seventy-three years of age. What followed these several steps and stages by which the small-pox was traced continuously into the house of the eldest son will be recited in a subsequent statement in this report. Suffice it to say here, that he was attacked with hemorrhagic small-pox and died on the fourth day. His corpse was buried privately, and the people warned to take precautions against the contagion to which they had probably been exposed. The town board of health took prompt action; but as it was ascertained that probably a hundred persons and families in Hector and surrounding towns had been exposed to the dying man, the necessity for organizing effectually for general vaccination in the several towns was obvious. Therefore, the State Board immediately notified twelve town and village boards of health, and offered such aid as it could to extend systematic vaccination throughout all the school districts of the entire region as rapidly as possible. Though only recently organized, all of these town boards of health proceeded in their duties without delay and with entire harmony and success.

Tracing and hunting down the course of such a destructive contagion has become possible under the present system of local and general sanitary organization; and, as the instance of presumed transportation of the contagion from the arrested car at Hornellsville to a sequestered cottage in Hector, is the only escape of it yet discovered, we may hope no more like this will occur.[*]

The maintenance of a sanitary inspection of emigrant trains upon the two great railway trunk lines through the State, as mentioned in the second annual report, was undertaken, upon a reorganized and partially nationalized plan, and was steadily kept up until December 1. Dr. A. L. Perry, the inspector upon the N. Y. C. & H. R. R., maintained this service daily between Syracuse and Buffalo and Suspension Bridge; while Dr. J. H. Trumbull performed a like service daily, from June 1 to December 1, upon the N. Y., L. E. & W., and the N. Y., Pa. & Ohio, between Hornellsville and the western frontier of the State. During a part of the season the National Board of Health paid a certain sum monthly to those inspectors. The State Board covered the other portions of the period by *per diem* allowances. This service was continued until the requirements of the New York State quarantine establishments as well as those of the National Government, under a new law, came to be generally complied with upon the emigrant ships and at the European ports of departure. In the Health Officer's report, in a subsequent chapter, as chairman of the standing committee on quarantine, as well as in the statements appended by the Secretary concerning small-pox and vaccination, important records will be found relating to these subjects.

---

[*] Since this report was made ready for the printer, it is ascertained that, of those exposed to the contagion by Mr. Compton, twenty-one have been attacked and seven have died, most of the cases being malignant and hæmorrhagic. Only one of the unvaccinated has escaped death, and that one a boy, twelve years of age, is horribly disfigured for life.

Typhus.— During the past summer this Board received repeated notices from the sanitary superintendent of New York city that Italian laborers from the West Shore R. R. lodgings, north of West Point, were being brought back to that city sick and dying with contagious typhus. Search was immediately made by local health officers and by expert medical inspectors sent by the State Board. It was found that several deaths, without suitable medical attendance, had occurred near Cornwall-on-the-Hudson, and that, in one instance, a coroner had held several inquests in a single crowded shanty lodging-place of the Italians. Though typho-malarial fever was the disease named in the verdicts, the sick who were found arriving in the city were suffering from true typhus. The shanty-lodgings of some six thousand laborers were rapidly inspected and sanitary regulations were established in them. The town boards of health took up the duty of continuing these inspections along the entire line, from Rockland to Onondaga county. The perilous crowding and filthiness of the gangs of laborers in their shanty-lodgings were breeding other diseases than typhus. Yet, as the latter had gained access to a few of the gangs, there is still a vigilant guard maintained against it. Its contagion still has a few hiding places in the city of New York, as described in last year's report.

Dysentery.—This disease, in a communicable or infectious form, was found to be prevailing at Knowlesville, in the town of Ridgeway, Orleans county. The President of this Board visited the place and conferred with the physicians, and as he coincided in their conclusions, all necessary hygienic precautions were adopted. A concise history of that epidemic, with a map of the field it invaded, and results of analysis of its well waters, will be found hereto appended.

Dysentery has prevailed in numerous other places during the year, but in no instance has its fatality in any degree equaled that which occurred in those districts of the city of Buffalo in the summer and autumn of 1881, where the inhabitants were at the time depending upon well-water for domestic uses; and it seems to be a notable fact that in far the greater number of instances of house and neighborhood epidemics of this dangerous malady, the defilement of the well-water is more frequently accused as the cause than all other circumstances together.

Other diarrhœal diseases.— The cities of New York, Albany, Troy, Schenectady and Buffalo, and not a few of the populous manufacturing villages suffer an excessive mortality from this class of diseases. Complex and various as the causes are, it seems to be true that as regards the young children, which perish by these diseases in the hot season, the greater numbers of them could be saved alive were they removed from the miasms which surround them, and domiciled wherever a pure atmosphere and pure milk would be supplied to them.

These little ones perish in places where older lives are comparatively secure. The sanitary resorts to which infants and children should be taken in the hot summer time are worthy all the study and expenditure given them.

Pulmonary consumption.— The first 7,000 records of deaths registered in the State Bureau of Vital Statistics show 856 accredited to tubercular phthisis of the lungs or "consumption." As these first registered were fair samples of records for the entire State, it may justly be presumed that these 856 deaths from pulmonary phthisis, which constitute 12¼ per cent of the consecutive total number, correctly express the proportion which this one cause bears to the total mortality from all causes and at all ages.

The avoidable and preventable causes of this greatest of the destroyers of human life must continue to receive the laborious investigation of sanitary and medical authorities, and it will not be counted strange or unworthy that, as recently has occurred, the most ardent of such investigators should express great joy and hope for the practical outcome of discoveries concerning causes and repression of the disease. It has been ascertained that in the very processes of education and provisions of schools and colleges the preventable causes of this disease are by various means invited and made fatally active; and that in many respects the habits and habitations, the industrial occupations, the modes and places of amusement, and even the places of public worship, and especially the court-rooms, and the various other places of public assemblage, for duty or other purposes, their vitiated air which is breathed and re-breathed, and the overheating and saturation of it have much to do in producing the tuberculous as well as acute diseases of the respiratory organs. It will be remembered that in the report last year the fact appeared that in many of the common school-houses, the pupils in their study and recitation-rooms had less than 100 cubic feet of air-space each, and that in some of the large city school-rooms the children were crowded at the rate of only 65 to 75 cubic feet for each. Such crowding and vitiation of school-rooms must be prevented, by school boards or local sanitary authority, even if a given school were to be divided in two sections each, separately on half-time attendance daily.

Whatever may be the undetermined causes of tuberculous consumption, the known causes are so well understood that most of them can be overcome or prevented; and it is worthy of repetition in every report upon them that the general and specific conditions of sanitary improvement of building sites and of dwellings, of neighborhoods and of districts, admit of those essential and common kinds of drainage and general sanitation which experience has proved to be effectual in extinguishing or repressing by some means yet to be fully explained by medical and sanitary science, some of the most generally fatal causes of pulmonary diseases, the chief of which is consumption.

The sanitary care of communicable diseases — contagious disease Refuges and temporary Hospitals.— The saving of the lives of the sick and the preventing of fatal contagion and infection from their maladies are now recognized in the amended general Health Act as sanitary duties of primary obligation in every community. Not only is it made the duty of every board of health, "in all cases where sick persons cannot otherwise be provided for, to procure for them medical and other attendance and necessaries," but also, "to procure suitable places for the reception of persons and things infected with malignant, contagious or infectious diseases." These being obligatory duties of local boards of health, and the medical officers throughout the State being charged with the responsibility of administering this kind of service, the State Board has not hesitated to offer the assistance and information needed by the great number of newly-organized sanitary authorities in their plans and preparation for these duties.

The specific personal communication of disease by the sick and their excreta have at last been studied with such discrimination as to enable medical officers and family physicians to determine what special sanitary measures are necessary or justified for the prevention of disease as well as for the recovery of the sick, in each of the maladies now classified as contagious or infectious. There is, therefore, no good excuse for the medical or official failure so to discriminate and act as to limit to the very least extent the distribution and spreading of the infectious causes of disease. Yet in giving full effect to the necessary sanitary regulations to repress contagious maladies, the sanitary authorities find that two very serious obstacles confront them in what seem at this day to be errors of common opinion, to wit, that, on the one hand, only a limited proportion of the cases or outbreaks of the contagious and infectuous diseases, so-called, occur as the result of a specific contagion at all, as in scarlet fever for instance, and on the other hand, that by abundant exposure of the source of contagion, or the contagium itself in the open air, its harmful operation will be prevented and overcome by sheer dilution.

Whereas the sanitary precautions and enforced regulations of the local health authorities, as advised by the State Board, practically discredit the utility of such hypothetical conclusions, and require that, as effectually as practicable, the sick with these diseases be separated from other persons, and that all known sources of contagion or infection shall be disinfected; while the sick themselves shall enjoy every advantage that can come from the greatest possible dilution and removal of their own malignant emanations, and from the surrounding air, etc., of the sick chamber. The sanitary rules which are now coming into general operation for requiring the exclusion of school children from households suffering from diphtheria, scarlet fever and small-pox, and also prohibiting public funerals and other dangerous kinds of exposure of the dead before burial of the victims of these diseases, are based upon the same facts of medical experience and scientifically demonstrated truth as have induced this Board to offer to all medical and sanitary authorities and the people at large in the State, the necessary suggestions and the plans in much detail of specifications, for the prompt and effectual separation and domestic quarantine of the acute, contagious and infectious diseases. The published papers, known as numbers 13, 14, 15, 16, 38 and 41, and the illustrated circular, number 27, are devoted to this subject, and have been placed in suitable hands in every school district (outside of cities), in the State.

Not only is there a real necessity for preparation before hand, in each of the twenty-four cities of this State, of a contagious disease refuge and hospital, wholly separated from all other hospitals, but there is need that at least the plans and authority be ready for the instant preparation and use of such refuges in the chief villages and minor centers of population; and, fortunately, it is true that already certain opulent towns in which there are such villages and large populations have given complete and successful examples in the establishment of these refuge hospitals. As this Board early directed the attention of all local boards of health to this subject, and required the Secretary to cause to be prepared and published for general use the most available plans and descriptions to facilitate the sanitary duties thus proposed, the response of local authorities is now an ample reward for all the study and labor given to this matter and to the rational management of all domestic quarantine regulations. The munificent and enlightened action by which the health department of the city of New York has just been authorized to expend $30,000 in the preparation of contagious disease refuge hospitals in the metropolis is worthy the advanced knowledge and resources by which the public health service in this State is being made instructive and useful to the entire country.

The pest-house of former times, being now superseded by sanitary refuges, the terror and mortal dread even of small-pox subside when the well-fitted temporary hospital of such refuges receives and provides for the sick and becomes the house of recovery, while disinfection and vaccination at once put an end to contagion and fear. This Board has found no serious opposition to the establishment of such regulations for pest refuges, with the hospital as the house of recovery, so far as relates to small-pox. Nor have the sanitary rules for domestic quarantine of diphtheria and scarlatina been much contested. All sanitary regulations and procedures are appreciated as soon as they are correctly understood, and all contention is terminated as soon as the good results of isolation, special sanitation of persons and premises and skilled nursing — as advised by the Board — are witnessed. The most enlightened classes see such results from the necessary official and medical interference amongst the needy or ignorant classes, that the methods and rules which produce a great saving of life in the latter are adopted in a voluntary way in the best private dwellings. The time is doubtless near, and, indeed, has already come in every city, when in any closely-built sanitary jurisdiction of 5,000 or more inhabitants, it will be found desirable, if not absolutely a public health duty, to have a contagious disease refuge and hospital ever in readiness or capable of instant organization and use. In each city this should be made an indispensable and permanent institution, and should have ample facilities of space and structures for at least three kinds of the acute contagious diseases which most endanger and alarm the community; while in the small village and rural township it may only be necessary to maintain the rules of domestic isolation and disinfection, and be ever ready to establish a refuge for more distant isolation of small-pox in a pavilion or a tent, which shall be every way adapted for the recovery of the sick as well as for the protection of the public. It has recently occurred that in the midst of great panic and danger from small-pox in a much exposed quarter of a populous village, the head of an affluent family, in his well-furnished dwelling, consented, as advised by this Board, to accept the sequestered and airy refuge hut (of the kind shown in circular 27, of this Board's circulars, figure 1), he being in the first stage of confluent small-pox; and, after that little pavilion, which had been erected and furnished in a single night, had proved to be to him a house of recovery, he called for the account of cost for its construction, etc., and paid it as a just debt incurred in saving his life.

In the cities and largest of the villages the permanent sanitary refuges for saving from the most common and fatal contagious maladies will ere long be popular institutions for saving life and guarding the public health. The medical profession is already advocating their establishment. Said the president of the State Medical Society, a year ago: *"The large cities require a place, or places for the isolation and treatment of cases of scarlatina and diphtheria. Not only the tenement population, but the rich also, are in need of them." The obligatory duty of isolating and keeping under sanitary control all known sources of the contagia of pestilential disease will undoubtedly be publicly appreciated. It is a duty to be inculcated and judiciously enforced as an indispensable means of saving thousands of lives yearly.

POPULATION AND VITAL STATISTICS OF THE STATE.

The 5,082,871 inhabitants enumerated in the census of 1880, increasing at the rate of more than one and one-half per cent annually, throughout the State in the aggregate, were found to be much more rapidly augmenting the populations in cities and the manufacturing villages than in the rural districts. This disproportionate growth of cities and villages, which seems to be a natural law of modern civilization and the development of mechanical industries and the facilities for amassing wealth, may long continue. The yearly tally of the increase of population in each city, village and town has become a matter of practical interest to each local jurisdiction and to the State government; and the time seems to have arrived when, as the Honorable Secretary of State (Mr. Bigelow) suggested in submitting the Census Report for 1875, concerning the products, etc., in each community, *a yearly record* is desirable and may be had, the gains and losses and general statistics of the population shall be accurately recorded by proper means within each local jurisdiction and at the Capitol of the State.

The State Bureau of Registration of Vital Statistics, as organized by the State Board of Health, under the statute which created this Board and defines its duties, has begun to demonstrate that such local as well as central records and registry are practicable and should soon be complete as regards every town, village and city in the Commonwealth. Though at first it was a matter of some doubt whether the Registration of vital statistics could be successfully organized and conducted throughout the State without the aid of specially trained registry officers, or, at least, without as liberal compensation as any other State or country has provided, this Board has begun the service of general registration, with such authority and provisions as the statutes offer.

---

*See copy of resolution of State Medical Society of New York, February, 1883, on Special Hospitals for Contagious Diseases, in an appended chapter of Records and Evidence relating to these diseases.

The increase of population. — The natural increase by births and further augmentation of the population by immigration are believed to amount to nearly two hundred thousand each year in New York. Death takes away eighty thousand and upwards, and migration from the State removes many, so that the net increase of population is less than a hundred thousand, assuming as we may, the comparison of the ninth and tenth national censuses, for a basis of such general estimations. It is one of the first public results promised by a State system of registration and vital statistics, that the gains and losses in the population of the Commonwealth, and of each town, village and city in it shall be correctly recorded.

Deaths. — Each successive census enumerates and publishes certain total numbers of the dead in the census year, but the burial grounds, for the same period, show that from forty-five to one hundred per cent greater numbers have been buried than the census enumerators were able to report. This fact sufficiently demonstrates the difficulty that ever prevents correct general returns of vital statistics when not demanded and secured immediately after the events to which they relate. The actual number of deaths in the State, year by year, will now be correctly recorded. Already there is ample evidence that the total is not less than 100,000 yearly. This is too high a death-rate for a population of 5,200,000. But the city of New York alone loses about 38,000 annually, by death, and now has a death-rate equal to thirty and upwards in every 1,000 of its population. Such a death-rate for the entire State shows a loss of 160,000 yearly ; but it is believed the actual death-rate for the State does not exceed twenty-one per 1,000. Urgent reasons placed in the Act for the Preservation of the Public Health a just requirement for a certified record of every death as a necessary condition precedent to a lawful burial. Such records are now faithfully made, and the untimely and excessive mortality are closely observed. The Board expects to be enabled to submit a complete record of the deaths which occur in the State in the year 1883.

The registry of marriages. — The laws having kept all branches of vital registry compactly grouped under our official head, the local boards of health, as well as the State Board, must deal wisely with that branch which relates to registry of marriage records, until these become as complete as those of birth and death. The law of nations, as well as of our several States, will undergo changes that are demanded by advancing civilization in regard to the universality and sanctity of the "Law of Marriage." The hygienic and the social circumstances of marriage as the lawful and honored covenant that should register the founding of the family sufficiently justify the enactments of the last three Legislatures by which the public health authority and the local recording officers are charged with the duties of enforcing and providing for the public registration of marriage. For the present such registry, under the supervision of the State Board of Health, seems to be a necessity of the public service, yet it must ultimately be provided for under laws that will require an attested record to be made by the contracting couples as a public obligation precedent to any ceremonial or registry of marriage. The sanitary, judicial, social and ecclesiastical testimony in favor of such law and such a change in the method of procuring and attesting this class of records is now both harmonious and urgent. Wherever this class of vital records is received and registered, under an amended statute the practical uses of marriage registers will remain the same. Unlike the daily and monthly records of births, deaths, burials, and the prevalent diseases, the records of marriage are reviewed for hygienic purposes at the longer intervals of seasons and years ; yet these purposes, as well as the social legal objects of the registry, have to be made sure by the methods which physiological and judicial counsels devise. The persons who contract and enter upon matrimony should offer a perfect compliance with and attestation of these records, while the ecclesiastical or magisterial certification of the marriage ceremonial would be offered to perfect the public registry as the seal of honor attached to the records of the married couples. This view of the registration of marriage has now been so generally explained throughout the State that the necessary amendment of law to perfect this class of records would prove satisfactory to the people. It is plainly necessary that the personal records and identification of the individuals who enter upon matrimony should furnish to the office for civil registry, as well as to the ecclesiastical or the civil authority by whom the ceremonial is to be witnessed, an attested copy of such personal and identifying records of the twain. By this easy requirement the foundation of the family will have an honorable record, and every minister and magistrate who solemnizes the matrimonial ceremony will have a lawful warrant for attesting the validity of his act. Social order, morality and the demand of civilization obviously require that the public registry of marriage records shall be universally valid throughout all the States and Nations. The State which would establish a claim for such universal recognition of the validity of its registered marriages must secure in the primary records of every marriage a trustworthy attestation of the facts. Let magistrates and ministers continue to certify their ceremonial acts, but let the laws secure to them, and for the public registers, an attested record of the contracting persons.

Records of burials. — The laws relating to this subject, as enacted in 1880, 1881 and 1882, have resulted in committing to boards of health all the duties of regulating burials and the sanitary care of the dead. The State Board of Health remains responsible for preparing the proper forms and rules, while each local board frames and executes the necessary local regulations; and in case of absence, inactivity, or even great distance of the local sanitary authority, any justice of the peace may cause the lawful records to be filled out in proper forms, which, being by him attested, shall warrant him in granting a burial or transit permit. The possible inconvenience that was anticipated in large and sparsely inhabited towns has been entirely obviated by this available provision of the law.

The laws require that a certified record of a deceased person and the cause of death shall be the evidence upon which the burial or removal of the decedent shall be lawfully permitted. This is proved to be so just and reasonable a requirement, that objections and evasions seldom occur. This Board being responsible, under the laws, for the preparation of the forms and general regulations for this service, it has given the instructions and sample forms needed by local authorities, and has placed sample certificates and other forms, with full instructions in the hands of each school district clerk in the towns. By these agencies, which have enlisted the best people in every community to act as local supporters of the registry laws, the proper sanitary regulation of burials and the burial places is being brought about, and various kinds of improprieties and hazardous practices relating to the exposure and movement of remains of the dead are interfered with in an official way. All public carriers, especially the railway and express companies, have satisfactorily complied with these new requirements of the public health laws. They all alike find that much time and embarrassment can be saved by strict compliance with these sanitary public regulations. The skeptical objections which for a brief period were made to the sanitary regulations against the exposure and public funeral of the dead from certain dangerous contagions have died away. Families, clergymen and public carriers of remains of the dead now very generally comply with these rules.

The local registration.— The effort to induce and effectually organize the local action promises entire success to the extent of the active existence of town and village boards of health. Perfect success in the registry service cannot be insured in towns and villages where the sanitary authorities are delinquent. Even the registration in the few cities which have not yet transferred the control of it to the sanitary authorities is defective and untrustworthy. In the cities of New York and Brooklyn, where for sixteen years and upward this branch of service has been controlled by the boards of health, the most perfect examples are presented in the records of mortality. Albany has, in the first few months' experience under its new health board, organized in accordance with the general health law, proved that the State regulations prevent the omissions and defects that inhered in the registry under municipal ordinances. As all towns and incorporated villages must maintain registration within their respective jurisdictions, or yield to the temporary assumption of that duty by the State Board of Health at their local cost, it now appears to be practicable to make the records and registry as complete and perfect in the towns as in the cities. The highest public uses of these records are realized when they are promptly and completely registered. They constitute the account current of human life in every community.

LOCAL BOARDS OF HEALTH — PRACTICAL OPERATION OF THE AMENDED LAWS RELATING TO THEM.

The general law for the preservation of the public health, which from 1850 to 1881 had authorized the creation and services of local boards of health in times of epidemics, or whenever the constituted civil authority deemed it necessary to organize such service. As originally enacted for the protection of the State against cholera, such a law for an occasional and temporary existence of local boards of health, was inadequate to meet the constant sanitary necessities of the people. The general law, as amended in 1881 and 1882, requires every town, village and city to maintain its board of health in an uninterrupted existence and to require at its hands certain constant duties. The town clerk and a chosen citizen being united with the supervisor and the justices of the peace, constituting a town board of health, and in villages a smaller number of members being appointed by the board of trustees, from citizens not of their own corporation, to be the village health board; while cities have their boards constituted as variously as the structure of their respective charters, except as they have reorganized under the general health act, as have the cities of Albany, Cohoes, Ogdensburgh and Syracuse.

The general act confers powers and prescribes methods of procedure well adapted to secure the efficient and just operation of sanitary laws and regulations, and in no case that has been brought to the attention of this Board has there been a well-founded complaint of injustice or hardship by the parties upon whom a board's orders for compliance have been enforced. This success of the boards is in part attributable to the useful results of the "hearing" that is usually offered to the persons whose property or business interests are presumed to be affected by the operation of a sanitary order or regulation. The prudence as well as zeal and energy in the sanitary administration by these new local boards of health is most commendable.

As soon as town boards of health became numerous certain essential outlines and examples of procedure, in the local sanitary service, were presented by the State Board to every health officer and supervisor. That document, with appended specifications for the official supervision of contagious diseases, is known as No. 27 of this Board's papers, and it has become one of the most useful publications. The care of acute contagious diseases has been promptly and well learned by local boards and medical officers, who, in turn, have inculcated and applied a very practical code of sanitary rules and regulations. The demand for the circulars and other memoranda of information and sanitary advice, as published for local uses by the State Board, has resulted in the mailing, for such purposes, of nearly three hundred thousand compactly printed pages, which are now to be found in all the school districts and health offices in the State. The town and village boards of health have, with general success, induced the public school officers to require all attendants at school to be vaccinated and to regulate the exclusion of contagious diseases from the schools, as instructed by the State Board. In this endeavor of the local boards of health and the school officers, upwards of a hundred thousand pages of this Board's published rules and advice have been called for and distributed in the school districts of the towns.

The town health boards have succeeded in accommodating their supervision of the records of deaths and burials, as regards all rules for the same, under the laws, to the wants of communities, that only the members of the boards are put to inconvenience in providing the required burial permits based upon the certified records which the laws require. Seeing the necessity of making common compliance with the new requirements of law in this matter as easy and certain as possible, each board designates certain qualified members of its own body, besides the health officer, to receive or perfect the certificates of death and grant burial permits in cases needing nearer accommodation than the office of the Board can give. The uniform willingness of local boards to do this and the ability of the people in most sparsely settled districts to comply with all regulations under these conditions, now promise entire success in the registry of mortality in every town. The interest and intelligence of the people have been successfully enlisted in this duty, though, at first, there were strenuous objections made, even throughout entire counties, because of the fear of local prejudices against a record of causes of death, the possible interference with funeral arrangements, or, in a few instances, the belief that such records and regulations would be attended by the imposition of fees or other kinds of cost. Patient explanation and a year's experience have removed these objections.

Village boards of health have no inconvenience in these duties, as a central and accessible office and representative of the Board are ever ready to receive the certificates and give information and any papers required. City boards of health provide for and enforce this class of duties in exact proportion to the efficiency of their general sanitary service.

In concluding this comment upon the local boards, it must be stated that the best experience shows that as regards the city and village health boards, they should be endowed with adequate authority and responsibility by the municipal authority which creates them to hold them without excuse for delinquencies and faults in the sanitary and registry duties. Also, that in regard to town boards of health, the health officer under each board, with such aid as the board may give him, should be required to make a sanitary inspection of the populous portions of the township, and of all its school-houses and places of public assemblage. To secure this result we submit a proposition, in a subsequent section, for requiring this duty to be systematically and well attended to under the rules which the State Board shall supply. Though a like sanitary duty is equally important in the cities and incorporated villages, their chartered rights and powers of local legislation and expenditures leave their boards of health and education respectively without excuse for any neglect or failure in such all-important service for the people. The common protection of the public health and family health requires such systematic sanitary inspection and oversight, and we believe the time has come to require it by law.

WORK OF THE BOARD ON APPEALS FROM CITIZENS AND LOCAL BOARDS, AND AS REQUIRED IN THE CASES REFERRED TO THE BOARD BY THE GOVERNOR.

Appeals and requests made to the State Board of Health, inclusive of those which come to this Board with an order from the Governor, are mainly of three classes:

(1.) Those which local boards of health or their officers make to the State Board directly.

(2.) Those which inhabitants of a locality make directly concerning any cause unfavorably affecting the public health.

(3.) Complaints, petitions or appeals which are sent to the Governor of the State, and by him transmitted with his instructions, or orders to the Board, for investigation and report.

In accordance with section six of the Organic Act, which defines the duties of this Board, it is peremptorily required that "they shall make inquiries in respect to the causes of disease, and especially of epidemics, and investigate the sources of mortality, and the effects of localities, employments and other conditions upon the public health." Whenever the Governor of the State, however, requires this Board "to examine into nuisances, or questions affecting the security of life and health in any locality," the Board, in all instances, proceeds without delay, aided by whatever resources it needs to command and order or provide for; the Governor then takes action, or not, to enforce the execution of the duties or works recommended by the Board. The conclusions as well as the details of information which the Board transmits to the Governor are also given to the persons and parties whose duty it is to carry into effect the conclusions which have so been reached and reported officially. The actual improvements and benefits resulting from such investigations and conclusions are more frequently to be estimated by their influence in securing the voluntary performance of duties and execution of necessary work, than by any judicial action and constrained enforcement in regard to such obligations and work.

These works of the Board have thus far related chiefly to the following duties:

1. The necessary aid and advice to secure the organization and efficient working of local boards of health.
2. The preparation and issuing of necessary sanitary and official instruction.
3. The careful investigation of questions and complaints as submitted by local officials and other persons who seek such aid and counsel from the State Board.
4. The investigation of all matters of complaint, petitions, etc., as the Governor directs the Board to do.
5. The preparation of special reports, plans and specifications, by expert sanitary engineers and other skilled helpers employed for the purpose by the Board.
6. The continued examination and proper testing of existing laws relating to public health and the registry duties, and the study and preparation of improvements that are deemed necessary in the amendment of health laws and in the methods of sanitary administration.
7. The sanitary inspection and official advising in regard to public institutions, most notably the public schools.
8. The official oversight and instruction or advising in regard to the infectious fevers and diphtheria, small-pox (and its prevention by vaccination), the sanitary relations of foreign immigration, and the whole range of quarantine laws and methods, both external and internal.
9. Counsel and aid in the perfecting of local boards and their duties and the administration of the registration laws and the perfecting of the local registry by them.
10. The special investigation of endemics and epidemics and of the contagious prevalence of fatal diseases; the searching for local and other causes, and the reporting thereon, with sanitary maps and charts.
11. The beginning of investigation of the practical questions continually presented throughout the State, relating to sanitary drainage, sewerage and domestic hygiene, sanitary topography and malaria.

These topics continued to receive attention during the past year, and at the present time there is as much of all these branches of labor under treatment as it is convenient for the Board to deal with. Only in regard to the preparation of amendments of law, and the devising of forms and methods, is there any decrease of labor.

Thus far in a period of *twenty-eight months,* as shown in records of this Board, the separate works undertaken may be arranged as follows:

An investigation and conference with engineers and local authorities for drainage and sewerage, to abate the nuisance of the Hamburgh street and Main canals, etc., on petition of Buffalo city authorities. A topographical map and chart with complete reports by civil engineers, employed by that city, facilitated this duty and enabled the Board to co-operate successfully. That city has adopted a system of intercepting sewerage, to deliver itself and the Erie canal from a perilous nuisance.

The official entry and inspection of extensive premises, which a village board of health was forbidden to enter, which resulted in the immediate reporting to and local ordering by that board of an extensive sanitary reform of a popular water-side resort. In the annexed memorandum this is shown, and to it we can now add, that the proprietor has added to his first $10,000 expenditure on this reform nearly $10,000 more, and states that he has gained by that large expenditure.

Inspection of a water-side hotel and summer resort by a sanitary engineer and the committee. — June 28th the president of the board of health of ——— sent the following telegram: "Please, will the State Board of Health supply a sanitary engineer and inspector, to make an examination of the ——— hotel. Diphtheria has broken out." To this the following reply was sent: "Will call on you and the health officer, at the residence of the latter with a sanitary engineer, at 9:30 A. M., July 2.

(Signed) " ——— ———,
Secretary."

At the appointed hour, the Secretary of the Board, accompanied by Mr. T. J. Nealis, sanitary engineer of the health department, New York city, met the president and health officer of the village, and proceeded to make a careful inspection of the hotel. The details of the inspection were duly recorded by the local board of health. It resulted in the following orders, made by the local Board before leaving the premises that evening after the formal statement by the sanitary engineer, of what would be required in each particular:

"Upon results of inspection by the local board of health of ———, and sanitary engineer Thomas J. Nealis, and the Secretary of the State Board of Health,

Resolved, That the proprietor of the ——— Hotel be directed to carry out the following precautions and repairs which are reported to this Board as essential for the protection of health:

1. To empty, disinfect and cleanse the receiving-vault in the basement at the head of main sewer, and the pipes discharging therein.
2. To remove all obstructions from sewers.
3. To ventilate receiving-vault by a six-inch pipe, carried above the highest point of the roof.
4. To have the flag-stone over the receiving-vault laid in cement.

5. To provide a trapped-sink in place of the open slop grating which discharges into receiving-vault.

6. To have the servants' water-closets in basement either wholly renewed, or placed and kept in proper sanitary condition. To disinfect and remove all filth from ground under seats.

7. To thoroughly disinfect, cleanse, and ventilate basement, removing the flooring and soaked wood-work around water-closets.

8. To place stench traps in waste-pipes directly under all untrapped fixtures, and to have all slip-joints made tight.

9. To have ice-boxes disconnected from sewers and made to discharge into trapped safes.

10. To have all openings from surface of basement into sewers effectually closed.

11. To effectually repair sewer from ice-house, and trap it so that no gas can escape into house.

12. To continue the soil pipe in each wing, at its full calibre, up to not less than two feet above the roof.

The execution of the work was commenced at eleven P. M., the same evening, and resumed at four A. M. on Monday following, continuing until the entire work was satisfactory.

The investigation of sources of a malarial epidemic in a highland village and valley upon petition of the inhabitants and by order of the Governor.— The invasion having been gradual, in two years became epidemic, and was not controllable by usual methods of drainage. The Governor's orders were directed to the railroad corporation that holds and occupies an embankment 3,500 feet long by twenty-six to thirty feet in height, that has turned a level bed of a river for three-quarters of a mile into a slimy pool and mud-bed, while a new channel has formed, leaving nearly one hundred acres of miasmatic grounds with muddy margins in a high and dry hill region. The railroad being controlled by a mere "construction company," the execution of work under the order is much delayed.

Investigations of outbreaks and limited districts of fatal prevalence of diphtheria were made by a standing committee and expert physicians in some twenty different towns and counties. Some of the natural laws of this destructive disease have been usefully studied, and a greater success has attended the Board's recommendation than was predicted. As the proprietor of a vast forest estate in Fulton and Hamilton counties, where diphtheria made its appearance as described in the Board's first annual report, recently informed a member of the Board, "the entire population upon the estate believed and acted upon rules which the Board had placed in every household, and they, and all others who witnessed the arrest of the malignant outbreak, believe they were saved by these means. Thousands of dollars, as well as many lives, were saved." This wilderness population of some eighty families, twenty-five miles distant from a physician, began to suffer as though a pestilence had come. In thirteen of the best of the dwellings, with forty-five children, there were forty-three cases and ten deaths before the absolute rules of sanitary control and nursing were adopted. The two physicians nearest the population gave themselves to duties advised and provided for by this Board and the resident agent of the estate gave material aid.

Investigations into the local causes of fatal endemics of dysentery *and of enteric fever* have been made in some twenty places. The fatal effects of polluted water, and of rapidly putrifying vegetable matters about dwelling-houses, or upon the margins of stagnant ponds and mud-flats, are the more frequent local causes; while crowding of lodgers in unhealthful quarters and upon miasmatic grounds, and in a few instances, the introduction of a first case of one or the other of these maladies, are plainly shown to be preventable causes. Local authorities have been incited to the necessary efforts and have made sanitary inspections from lodging to lodging.

The methods of watchfulness against outbreaks of small-pox have resulted in the use of the telegraph as well as the mails for notification to, and advice by, the State Board. In the eighteen months ending December, 1882, there were one hundred and sixty such notifications to the central office of the Board. The promptness of advice and action thus secured has kept that contagious pest under control. An official notification to each of the school districts in the State, as provided in circulars 38 and 41, has induced general compliance with the vaccination law and the Board's instructions. Thus the entire State has been brought under a degree of sanitary protection never before experienced in its history, as regards small-pox and vaccination.

To make sure of timely and adequate sanitary measures to arrest the progress of infectious diseases, the Board has caused plans and estimates to be so prepared and distributed, that the local board of health in each town, village and city shall have in hand the working plans for contagious disease refuges and temporary hospitals. (See circulars 27, A and B.) These circulars describe the best methods of procedure and are published and distributed as a manual for daily use of local sanitary authorities.

The organization of the local boards of health and the discriminating and enlightened concern regarding the preventable causes of sickness, and other harm to health, have resulted in opening an incessant line of questions and answers, and appeals for counsel and direction, which already constitute an important daily service at the central office of this Board. In subsequent sections of this report and the chapters appended hereto, the nature of these relations between the people and the State Board of Health is unfolded.

PROCEDURES UNDER SECTION EIGHTH, STATE BOARD OF HEALTH LAW.

The executive resources of the law creating the State Board of Health are centralized in its eighth section, and as amended in 1882, by chapter 308, the power of the Governor of the State to cause the execution of his orders upon the findings or conclusions of this Board are ample. The few orders of the Governor that have been issued upon the basis of this law, before its amendment, have not failed of execution, except in two instances, where the work required was delayed, to the public detriment. Successful procedures for the execution of the orders in these two exceptional localities were instituted after the amendment of this section 8, by chapter 308, Laws of 1882.

Upon appeals and petitions made directly to the Governor of the State in accordance with the provisions under section 8 of the State Board of Health law, there have been referred to this Board by the Executive twenty-eight cases requiring investigation and report. All these have received prompt attention, and the Board's reports and conclusions thereon have in most instances been the means of securing the local improvements required, or the removal and prevention of the nuisances complained of. In a few instances it has been necessary to recommend that executive orders be issued to accomplish the required result. Such orders have been given by the Governor in the counties of Rensselaer, Kings, Queens, Westchester, Livingston, Chemung and Schuyler.

The first order by the Governor, upon results of investigation by the Board relates to the abatement of stagnant pools in Schaghticoke. The second order was upon nuisances at Hunter's Point, complained of by residents of New York, and chiefly relates to offensive products of petroleum. The nature of the nuisances and the results of the Executive orders are described in a chapter appended to this report and in an appendix to the Second Annual Report.

One of the most important of the Governor's orders relates to the drainage of the prism, or bed, of the late Genesee Valley canal, through a distance of some thirty miles, by the railroad company which had acquired the property from the State by purchase. The work required, and as originally advised by this Board, constitutes an essential part of a general plan and necessity for draining the swampy bottom of the canal, as brought to the attention of the Legislature in 1881. The canal property which remained in the State's possession on that line was already brought under thorough drainage by means of the appropriation which that Legislature made for the purpose. The Superintendent of Public Works successfully executed the work required on the latter portion, namely, that extending from Dansville to Kishaqua creek in Groveland, near Mt. Morris, and from that point northward to Scottsville, Monroe county, the Governor's order was enforced upon the railroad corporation. The requirements and plans for the latter section of the work will be seen in the report of the standing committee on drainage, sewerage and topography in the paper marked "A."

The successful execution of the work is a matter of congratulation; for miasmatic diseases became more and more prevalent during the three summers this section of an abandoned canal had been left to become a pernicious swamp and malarial bed.

This Board supplied all the aid in its power to prepare the engineering scheme of this work, as the appended report just referred to will testify. It also maintained a medical inspection, to secure whatever such observations and the experience of the people should furnish. Papers giving certain testimony relating to this subject will be found in the appended reports relating to diseases.

The delay to meet the responsibility in regard to the Governor's order upon a nuisance caused by a brewery in New Rochelle village has issued in the voluntary closure of the brewery.

The orders of the Governor upon the sources of nuisance at Schaghticoke were renewed under the provisions of the amended law, and have resulted in the voluntary undertaking of the difficult task of removing evils which had been thirty years progressing to culmination in a perpetual epidemic of miasmatic fevers. An appended report on this epidemic, as it appeared in the spring and early summer of 1882, shows that nearly one-half of the entire population was sick, and that business interests were jeoparded by that sickness. The diagrams and descriptions given in the committee's report show what natural difficulties are confronted in any attempt to drain and dry so extensive a *cul de sac,* or to convert, either into a running stream or into dry ground, such a tortuous stagnant channel as that of the abandoned bed of the river.

This important case illustrates various difficulties met with in applying lawful remedies to overcome evils where several causes contribute to them. In this instance the deflection of a river from its original channel through an alluvial flat occurred beyond the limits of the village that now suffers, and in part beyond the limits of the town in which the village is situated. After many years the channel became a festering pool, without motion, excepting when flooded by back-water from a point three-quarters of a mile below the beginning of the embankment by which the river had been wholly turned into its present or south channel.

The first evidence of the unhealthfulness of the locality was in the nature of a very fatal and persistent epidemic of diphtheria from 1876 to 1878. The next evidence was in the increase of miasmatic fevers, from a few cases in 1878 to a continued epidemic in 1880, and its persistence in 1881 and 1882. It is not presumed that this kind of sickness will disappear spontaneously, and it is to be hoped that, after the improvements now ordered are completed, the people of the village near by may cease to be afflicted with sickness that they have no power to prevent.

The sewerage and drainage questions which were submitted to this Board by the authorities of the city of Hudson were found to be vastly more important than that intimately associated with the "South Bay nuisance," of which many people in that city had complained heretofore. It was ascertained that the sewage of an extensive district had its outflow into the South bay, which at low tide is a vast mud-flat, extending over 100 acres or more. Further, that the southern slope of that city was not only insufficiently drained, but spills out its sewage and drainage in a bad way at the foot of the slope toward the South bay. The report by the Board's committee explains this matter and shows what the present want of sewerage in city of Hudson is.

The city of Yonkers appealed to this Board, first, through a body of its citizens, as shown in the first annual report, and more recently by personal petitions and an appeal by the municipal board of health directly to the Governor to require this Board's intervention to prevent the great evils which are familiarly known in that city as the "Nepperhan nuisance." The Board, in August last, renewed its examination, and, after careful inspection, with the aid of an expert engineer, and after a public hearing of complainants and the various manufacturers and contributors to the nuisance, reported to the Governor the conclusions then reached. They are found appended in this volume.

It appears that the delinquency of the legislative branch of the city government, as well as of certain executive departments of it, have become a reproach to the city, and that no reform and prevention of the causes of defilement of the Nepperhan river, upon which extensive manufacturing interests are located, can be expected under the lax municipal government. The Governor found no way in which his authority could be interposed to enforce sanitary duties. The report and map submitted to the Governor will be examined with interest in a chapter hereto appended.

Other cases of complaint and petition have been referred to the Board by the Governor; but in all instances the conclusions or advice given by the Board to the individuals and officials concerned have sufficed to secure the improvements desired.

Certain sources of miasmatic fevers complained of at Fairport, in the town of Perrinton, Monroe county, have been repeatedly and justly complained of. In this instance the obstructions upon the head-waters of the Irondequoit which flows through that village must be prevented, and in this duty the New York Central railroad has the first responsibility. The people of the village and town also have their share, and they are proceeding with their part of the duty. In this instance, fortunately, the railroad company will contribute its part. But besides this, there is an extensive nuisance caused by the stagnant pools in the bed of the old canal, which was abandoned under the "State Improvements" in 1857. The inhabitants justly appealed to the State to overcome that nuisance, for which it was responsible. An appended report shows what these evils respectively arise from.

In some cases the subject of petitions and report did not admit of an immediate settlement of the questions at issue.

In three instances the attention of this Board has been urgently called to an alleged source of sickness and mortality, caused by the accumulation of vast masses of saw-dust and mill-wastes in the near vicinity of dwellings, and in the case at Ford Edward the evidence of the nature, extent and results of this evil has been carefully examined, and in the opinion of this Board is deemed worthy of the application of a sufficiently comprehensive remedy in the nature of a statute for preventing the accumulation of such mill-wastes, as may at any time, and in any place, be properly applied to restrain persons and mills that are responsible for such causes of complaint.

The fact is that saw-dust-waste, and a great variety of other mill-wastes, consisting largely of albuminous, starchy, and glutinous substances in animal or vegetable matters, which enter upon the process of decomposition whenever accumulated in the presence of moisture and warmth, become dangerous to life and health, from the various conditions which now begin to be scientifically understood as the very sources in which the unseen or microscopic oganisms that produce the phenomena of decomposition and putrescence are bred and diffused, in such ways as now are charged with having some leading part in spreading and aggravating fatal diseases, and even in producing them.

Leaving all theories on this subject aside, rotten or decomposing vegetable matter, in the presence of moisture and warmth, may be justly accused of vastly more evil than has been charged to this class of causes of fatal fevers and blood-poisons. For these reasons, the accumulations of such waste matters should be prevented, and all local boards of health should find at hand some available law which, under judicious and responsible central advice and direction of State authority, they can apply, and with the central authority can make effectual throughout the whole extent of any water-course or water-side.

The State Engineer and Surveyor, together with the State Board of Health, should be empowered, and they may be found competent, it is hoped, to guide the needed application of such law.

The daily requests at this Board's central office for advice and direction in regard to local evils and complicated or unsettled questions in local sanitary administration have finally made it necessary to institute a systematic study of the sanitary topography and other special conditions characteristic of the populous towns and villages in this State. The few experienced civil engineers who from time to time have served this Board are frequently employed in these duties. The best experience also in local sanitary government becomes doubly useful in aiding the Board to give the advice and information called for, and as the special application of particular provisions of the health laws has been under review in a great variety of cases, it is found that there will be needed a more specific and well-defined authority to deal with certain evils that menace the health of towns and villages.

SANITARY DRAINAGE OF SWAMPY BEDS OF ABANDONED CANALS.

As noticed in its first and second annual reports, definite accusations of swampy conditions of recently-abandoned beds of certain recent canals of the State were presented to the attention of the Board, and subsequent petitions to the Governor brought these more prominently under review. Investigation fully confirmed the correctness of the medical opinion and common belief, that extensive lengths of these old canal prisms had become miasmatic, and that the sickness complained of was even more general and threatening than the complainants had represented.

The first report made to the Governor on this subject, by officers of this Board, related to the canal extending from the Chemung river northward to Seneca lake, which, upon each of its successive levels between its forty-four locks, had become a miasmatic breeding-bed; while from the forty-fourth lock, southward to an obstructing dam at the village of Horseheads, was an extended and entirely stagnant pond with mud margins.

The dam here mentioned had been authorized by a special enactment of the Legislature in 1879, on request of the people of Horseheads. Throughout the most populous portion of the entire valley here described more than one-half of the inhabitants had suffered from disabling malarial sickness for the two successive years. The report above referred to was made, after personal inspection by the President and Secretary, in a single paragraph, as follows:

"That they have made personal inspection of the places complained of and taken the testimony of physicians who have care of the people in the neighborhood. The amount of sickness is appalling, no family escaping the invasion of malarial diseases for a distance of two miles along the borders of the old canal, even children at breast becoming purple and shaking with the cold stage of intermittent. We find the prism of the abandoned canal has become a marsh. But we believe the whole danger can be removed by simply ditching, with a little filling at special points. We advise, if such work is undertaken, that the ditches be so protected at the sides as to become durable."

Dated *May* 30, 1881.

(*Signed* by President and Secretary of the Board.)

The Legislature, upon receiving this report from the Governor, immediately voted what was considered adequate to enable the Superintendent of Public Works to execute the drainage recommended as above. At the same time local boards of health and other citizens, in the towns between Dansville and Caledonia, in Genesee county, were calling for official advice and aid to overcome and prevent a similar source of miasmatic sickness, which gave them great anxiety.

While this brief report was being considered by the Legislature, the sanitary inspection of the nuisance complained of in the canal prism between Mt. Morris and Dansville was being completed, and, at the Governor's suggestion, the bill to provide for the drainage required in Chemung and Schuyler counties, as here described, was so amended as to meet the requirements for drainage of that portion of the abandoned Genesee Valley canal not yet sold to corporations and citizens; namely, the section known as the Dansville branch of the Genesee Valley canal.

Six thousand dollars were appropriated for this work under chapter 593 of 1881. The week after this law passed, the work was begun in the town of Veteran, Chemung county, at lock No. 27, and was pushed both northward and southward by a large force of laborers and teams until the 6th of August, when the drainage works were ended for the season, though not completed, as no further disturbance of the wet grounds was deemed justifiable in the dry, hot weather of the late summer and early autumn. Besides this, a considerable amount of filling and grading of certain portions of the canal bottom had before this been completed as being essential to drainage. The greater part of the drainage in that section of the canal, in three towns of the counties of Chemung and Schuyler, was, however, already completed.

At the same time the work was being pushed forward between the junction of the main stem of the old Genesee Valley canal and Dansville, on the branch leading to that village, a distance of some fifteen miles. The same reason prevailed as in the Chemung and Schuyler county drainage to terminate the work in the hot period of the early autumn, and to wait completion in 1882.

The results reported in September, October and November, 1881, along the canal beds thus far drained were exceedingly favorable, and as regards the entire course of the canal from Havana to lock No. 34 near Pine Valley, upon the southern border of the town of Veteran, malarial fever disappeared completely during the first week in September, and has not since reappeared, excepting in the very few cases which are alluded to by Hon. Dr. Beard in his report as hereto appended.

In the Genesee Valley, along the Dansville branch, similar, but not as complete, sanitary results ensued, as will be seen by the report of Dr. Ames, hereto appended.

In the spring of 1882 the drainage was recommenced, and has been completed upon both these extended lines of abandoned canal. The results have been made more conclusively favorable to the immediate or early value of such drainage than any one had predicted. The final report by Dr. Ames, upon the Genesee Valley drainage, is certainly satisfactory; and that by Hon. Dr. Beard is exceedingly exact and statistically conclusive, for he shows that in 1881 there were, between the 1st of June and November, 242 cases of malarial fever between Pine Valley bridge and Havana, a distance of six and one-half miles, while in 1882, during the corresponding period, there were only forty-one cases, forty of which were in a limited malarial spot near Pine Valley bridge. In other words, miasmatic diseases had practically disappeared excepting at a filthy and unhealthy spot near the Pine Valley "creamery."

Further south to within about two miles of Horseheads village the drainage was effectually completed during the past season. The Horseheads drainage will have to be provided for by concession of the people of that village who successfully appealed to the Legislature in 1879 to have a stagnant pond preserved by damming up the old canal bed at a point north of the village, and at its southern boundary also, thus preventing drainage through the natural channel southward into the Chemung river.

There now remains in the State treasury to the credit of the authorized drainage work by the State out of the $6,000 appropriated, $1,221.08, a sum quite sufficient, it is believed, to complete the drainage that may be necessary in preventing the outflow from the summit level of swamp land between Horseheads and the point northward where the drainage works terminated last summer. The completion of this extensive ditching and culverting work in a thorough manner, as first proposed by officers of this Board and provided for by the Legislature, has quite conclusively proved that the sanitary requisitions which the State Board of Health makes upon the Department of Public Works can be executed with decided advantage in economy, and with beneficial results which no one can dispute.

The drainage is now complete to a point of more than a mile south from lock and level No. 44, or to the summit divide of the water-shed between the Chemung and Susquehanna and the Catherine creek and Lake Ontario.

FINANCIAL STATEMENT. EXPENDITURES BY THE BOARD.

As required by the eleventh section of the law creating this Board, a detailed statement, made by the executive and finance committee, is appended, which shows for the fiscal year ending September 30, a total expenditure of $12,934.60, classified as follows:

Postage and expressage	$576 00
Printing and stationery	1,201 78
Scientific and expert services	2,728 57
Salaries and wages	7,472 12
Traveling and other necessary expenses of members of the Board, while on duty	843 21
Library	9 50
Miscellaneous expenses at central office	86 92
Furniture	16 50

The finance committee has estimated that the Board should have subject to its order, for necessary uses during the fiscal year beginning October 1, at least $20,000, so greatly has the Board's work extended, and the necessity for special service by scientific and skilled persons increased. Several such employed persons are on duty in some part of the State every week. The total amount that can be expended yearly in this way is limited to $5,000; yet much more of such work than that amount would pay for may be desirable. The members of the Board perform as much of such labor as they can, the doing of which will necessarily incur traveling expenses. The meetings of the Board required by law to be made at least quarterly, are actually held at much more frequent intervals.

The service incident to a more complete organization of work in the State Bureau of Registration and Vital Statistics has increased the clerical and printing expenditures. Whatever can be saved out of the total sum asked for, the Comptroller will keep to the credit of the Board for the subsequent year; and that officer guards our finances, and facilitates the Board's effort to economize and properly use the funds that are accredited to the Board's account.

LAW TO PREVENT THE ADULTERATION OF FOOD AND DRUGS (CHAPTER 407, LAWS OF 1881).

Under the operation of this law the Board has endeavored to lay a foundation of correct knowledge which shall enable all local boards of health and any citizens who have reason, to take action for repressing and preventing the adulteration of food and drugs and the sale and use of the same, to aid in this sanitary work. The considerable amount and variety of information presented on this subject in the Board's second annual report shows that the field for operation of this law is even more important than was known to the Legislature that enacted it. Difficult as this field is for the administration of adequate sanitary regulations, and largely as it partakes of the nature of sanitary police duties in which the observation and restraint depend upon the kinds of chemical and microscopical examination required, this Board has not attempted to excuse itself from the duty imposed by the Legislature, to supervise and give as full effect as possible to the operation of the law.

Perhaps the most important outcome of all the investigations thus far pursued under this law is that which will most concern the people when it comes into full effect for repressing and preventing wrongs. It is in certain common articles of food, and accessories of food universally in use, that there must be a relentless demand for the total arrest and prevention of the frauds and deception which are practiced in respect of those substances. The report of the standing committee which has charge of chemical investigations, under its chairman, Prof. Chas. F. Chandler, hereto appended, and the extended papers submitted by that committee and in part published in the second annual report, present the details which readers will desire concerning this matter. Suffice it here to say that milk, the most essential and permanently important element of human food which is liable to harm in the public marketing of it, is undoubtedly the most adulterated and injured of all food-articles; and as more than half the entire population in this State dwells in cities. and as it is believed that nearly two-thirds of all infants and children in the State depend upon milk daily purchased at the door or in the market places, such adulteration and tampering with vital food-elements of infancy and childhood is in its very nature a crime, against which the sanitary authorities of every grade in the State and all citizens should set themselves in earnest opposition, until pure and wholesome milk only shall be offered, whatever the method of its marketing and sale. In view of the practical importance of this subject, the Board has taken decided action to aid and advise local authorities of cities and villages in a legitimate warfare upon this crime, and against this wrong to families and their little ones.

The class of substances next in order of frequency and of harmful adulteration and fraudulent substitutions comprises accessories of food which the habit of the people, and what are considered necessities of the ordinary cuisine, among all classes of people, have made essential to the common diet, or necessary in the preparation of bread-foods, etc. Among these substances are the baking powders, such as cream of tartar, acid phosphates and other materials of admixture in aerating powders; the appetizing condiments and aids to digestion, such as mustard, pepper and spices. Perhaps the most important of all, are the adulterated stuffs which are sold under the names of coffee and tea. What actually are found to be constituents of these various substances as palmed off and huckstered in the markets to a very harmful extent throughout the State, will be examined with interest in the committee's report before referred to.

The simple fact appears, that the first cases brought into court to suffer the penalties imposed, even in the lower jurisdictions, which have cognizance of offenses against the Food and Drug Adulteration Act, were instances of dangerous substitutions and frauds, such as the sale of cream of tartar (*bitartrate of potash*) containing ninety-five parts of common *gypsum* or *terra alba* combined with five parts of *tartaric acid*, certainly a harmful irritating compound to enter into any article of food. In like manner the mustard, the coffee in packages, various delicate spices in tempting packets and covers, were found to be, as described in the committee's report here mentioned, "unfit for the human stomach and utterly fraudulent as accessories to food and diet."

Fortunately in a land overflowing with bread-stuffs, excellent in quality, and cheap in price, staple articles of food — milk in certain of the cities and large villages excepted — are so moderate in price that there can be but little temptation at present to deteriorate their quality by any kind of adulteration.

The adulteration and deterioration of drugs are evils associated with the commerce in these articles. The harms resulting therefrom are deplorable, for they endanger life, and may, and do it is believed, disappoint all reasonable hopes and promises of medical attendants upon the sick in dangerous diseases in which it is necessary to have the perfect therapeutical attributes of every article of the *materia medica* which is called for in the medical service. The most valued and precious of all lives in the family and the State may be put in jeopardy (and alas! have frequently been put in jeopardy), by the fault and failure of articles used in medicine after their deterioration or adulteration. The laws relating to the prevention of such evils in the drug market and in the prescription business of apothecaries are, therefore, just and right, and will need to be administered with fearless and faithful regard to the lives and health of the people.

Chapter 407 of the Laws of 1881, known as the "law to prevent the adulteration of food and drugs," was enacted as an experiment in a necessary branch of the service which no other State in the Union had yet tested. The law is based upon a report and a project for an act prepared by a learned commission that was engaged by appointment from the United States Board of Trade with the design to protect and, if possible, induce honesty in commerce of food-articles and drugs. The duties under this act impose an unsought and very onerous responsibility upon the State Board of Health. It has been the constant and urgent endeavor of the Board so to administer this law and set it in motion that its highest capability for public usefulness shall be secured, while at the same time no embarrassment or harm shall result to trade or to the necessities of the people.

THE LAW TO REGULATE THE STANDARD OF ILLUMINATING OILS AND FLUIDS FOR THE BETTER PROTECTION OF LIFE AND HEALTH AND PROPERTY (CHAPTER 292, LAWS OF 1882).

The terrible results of explosion of the naphthous vapors given off from petroleum and other illuminating fluids had come to be a subject of legislative interference in nearly half the States in the Union before the necessity for such an enactment was much agitated in the Legislature of this State. The law above entitled, as passed on the 6th of June last for the State of New York, is one of the simplest and most readily complied with of any of the existing American statutes relating to this matter.

The flashing test by which naphthous vapor is evolved from an illuminating fluid is quickly discovered when at a temperature of 100° Fahr. a jet of flame is brought in contact with it. This test is all that the law has required, except so far as relates to oils that must be of still higher security against the presence of such vapor, where the oil itself must not ignite at any temperature lower than 300° Fahr. This latter test is required for protection of railway and other steam carriages ; and there is no reason to believe that the operation of the law under either, will cause any injustice or hardship to those who manufacture, use, or deal in kerosene and other illuminating oils.

An important and instructive statement concerning the operation of this law during the past few months will be found appended hereto. The statement shows that, in numerous large villages and in at least two cities, a great proportion of the samples of kerosene purchased for the State, during the past autumn, were proved to be below the standard required by law, and that some of the samples were found to give off explosive naphthous vapor at the ordinary temperature of the family apartments and work-shops in which such lights are used. In several cases of fatal burning from explosions of these dangerous illuminating fluids, the Board has caused to be instituted the necessary procedures for the conviction and penalties required in such cases. As the law makes it "the duty of all district attorneys of the counties in this State to represent and prosecute, in behalf of the people within their respective counties, all cases of offenses arising under the provisions of this act, these prosecuting officers have, whenever this Board has requested, proceeded to bring the cases before courts of competent jurisdiction.

While it remains to be seen whether the existing law is sufficiently exacting or strong enough to repress and prevent unlawful practices defined in the act as dangerous to life, health and property, it is safe to say that the general effect of the act has beneficially awakened the interest of the people, dealers and manufacturers alike in regard to the duty, whatever means may be necessary, to prevent the kerosene horrors.

SCHOOL HYGIENE. — PROGRESS OF EFFORTS TO PROMOTE HEALTH IN THE SCHOOLS.

Early in the second year of this Board's work it became a duty to answer various practical questions asked by school officers and teachers concerning health in the public schools. The fact that the most destructive contagious diseases of children, namely, diphtheria and scarlet fever, induced such inquiry, indicated the willingness of the people to do something to prevent the common school from furnishing the means and place through which such contagions fatally spread.

In order to accomplish any good thing effectually, means must be adapted to the end, and inquiries and statistics must be upon a sufficiently comprehensive basis; consequently, the mode of investigation into the sanitary condition and wants of school-houses was deliberately planned, as set forth in the Board's second annual report, and in its published chapter of certain results attained in the beginning of school inspection, as published in paper No. 43 of the Board's current series.

So much space was occupied with the subject in the last annual report, that it is not expedient in this, the next succeeding report, to add much upon this subject. Suffice it here to state that the voluntary undertaking of exact and complete investigations by local school boards, and particularly by health officers and some of the superintendents and commissioners of schools have been going on steadily and with increasingly important results in every county in the State since the last year's report was completed. Examples of these reports separately appear in the appended papers from the standing committee on public institutions.

The following points in this experience of the Board's intrusion of sanitary questions and sanitary duties into all the public schools of the State may be concisely enumerated :

(1.) School officers, parents, and the public press have, without a single known exception, encouraged and repeated this mode and plan of offering sanitary advice and formulating certain essential sanitary rules for health in the schools.

(2.) Certain most necessary regulations and advice for the prevention of the occurrence and spread of contagious maladies among school children have been called for and presented in all the school districts of the State ; and in the reports now and for some months past being received from school district officers and local boards of health, it is shown that the sanitary rules and advice given in the Board's papers, Nos. 38, 41 and 43, are generally and cheerfully followed.

(3.) The willingness to obey, and the good results ensuing upon the official notification to require compliance with the statute relating to vaccination of attendants at the public schools, have been thus far without exception, and compliance is now officially enforced without difficulty. The official approval of a published statement by the Superintendent of Public Instruction upon this subject, in January, 1882, continues to have an excellent influence with teachers and school officers. The papers here mentioned will be found in the appendix to this report.

(4.) The structural improvement for sanitary purposes, chiefly in old school buildings, are numerous, and they begin to give proof of their utility.

(5.) The increasing and widely extended interest in regard to health in schools is resulting advantageously in the provision for sanitary wants in many of the school buildings now in progress of construction or under orders for building. The example presented in the plans of the new school building in Auburn, now being finished, is included in the committee's report as an illustration of results that are sought in this Board's action concerning school hygiene. The reports from Auburn, Elmira, and other places, as given in the appendix, will also be examined with advantage.

(6.) Overcrowding of school-rooms is an evil equaled only by its concomitant, the lack of ventilation. Defilement, amounting to poisoning of the atmosphere of a vast proportion of the school-rooms, especially in the populous villages and cities, is a wrong which, at the mildest, this Board denounces as homicidal. These evils can be prevented, and they must be; if not by an enlightened and reasonable school board and the people, they necessarily become public health questions and must in some manner be understandingly and successfully met. Already in some of these overcrowded schools experience has proved that a school for young children may be successfully divided and conducted on the half-time principle, one equal section having the school-room for the morning hours, the other equal section having it during the afternoon hours; but such a dernier resort is to be recommended only to save health and life in families which trust their children to the public schools.

(7.) There is ascertained to be an imperative necessity for the thorough instruction and indoctrination of school teachers in the plain natural laws relating to hygiene, and in a practical knowledge of human physiology, which should be tested by examination before any certificate or license to teach is given the public school teacher.

(8.) The duty of the local civil government in every community of families, and of the State itself, to require that all school-rooms and school-building sites shall be examined and approved by competent sanitary authority, is a fact conceded by the most intelligent of our public school teachers and most experienced school officers. For the present this Board is urgently advising and securing such inspection wherever it can be made accessible and practicable. In all cities this duty of sanitary watchfulness over the school-rooms and all that concerns health in education certainly is worthy to be specially ordered and provided for in the scheme of public education and public health care.

The measureless human interests centered in the school-room, where upwards of a million children and youth are daily assembled, should need no other plea than these statements concerning them.

MALARIAL AND MIASMATIC DISEASES.

The localities of paludal malaria the extent to which miasmatic diseases prevail cannot be ascertained from records of death, but from reports of sickness, yet the total mortality from the miasmatic fevers and other kinds of disease from the same class of causes is considerable. The special sources of these diseases abound in the large cities as well as in the regions of drying swamps and stagnant ponds or undrained basins and water-soaked grounds. The local suffering from malaria is often found to exceed even that which, from other causes, is attended by great mortality. In some instances the increase and persistence of malaria breaks down the health of many families, discourages enterprise, and drives the thrifty classes and their business to more healthful localities. The villages and hamlets that suffer thus, in this State, present some very conclusive illustrations of the disastrous losses caused by a local source of sickness when unremoved. The cities which suffer most live by their commerce and trades, and as their inhabitants cannot thus be driven away to more healthful places the sources of malaria and other miasms in the larger cities exert a vast influence upon the public health and total mortality. The share which the malarial causes actually have in the nearly sixty thousand deaths yearly in the metropolitan district alone will not be correctly known nor sufficiently appreciated until the sources of malaria there are controlled.

It is to the debilitating sickness and its pernicious results, rather than to the number of deaths that the local sanitary advisers point in all their reports of malarial diseases. Practical illustrations of the significance and importance of sanitary and statistical investigations of the local sources and results of malarial diseases are given in a chapter appended to this report. The instances at Fairport, Monroe county, and at Schaghticoke, Rensselaer county, are conspicuously noticeable; for in the former place, in the midst of the dry and healthful drift-ridges, the thirteen families whose dwellings were nearest the stagnant and drying creeks in the valley where the Irondequoit rivulet has its head, had, at the time of a recent sanitary census, forty-two cases of malarial sickness in a total of their fifty-nine inmates; while in the village of Schaghticoke, in the midst of highlands and upon a narrow promontory of rock and gravel around which the Hoosick river coursed in rock-bottomed channels, and from the upper incurvature of that one nearest the eastern margin of the promontory, the river has been wholly turned away to the left, leaving some eighty acres of bottom land, with that entire curvature of the old channel a chain of stagnant pools with muddy margins in the midst of that rich bottom land. The sanitary census, as taken under the supervision of the local health officer, found, in a total population of 1,475 inhabitants, 672 persons suffering from malarial fevers; and at the time of the inspections made by the State Board in July and August last, groups of ten and more dwellings taken consecutively, and nearest the miasmatic area on which are no dwellings, had fever and ague in every house, and in some of the families with as many as ten members, every one was sick with that malady. The report upon the last-mentioned village and the sources of the evil that has come upon it, as submitted in a subsequent chapter, will be examined with interest in connection with a report on the same subject in the Board's first annual report. The fact is shown that malarial fever began to prevail there only five or six years ago. The obvious sources of the miasmatic sickness there must be overcome by comprehensive and effectual treatment or it were better that the village and its factories were deserted.

The nature and pernicious results of locally and even domestically induced sources of prevalent malarial sickness are shown in the reports submitted by the health officer of a little hamlet in Mt. Pleasant, Westchester county, where a member of this Board with Dr. Carroll, an expert inspector, joined the town authorities in the investigation. The facts here presented are deemed worthy of a condensed statement in the appendix of this report. It appears that in a period of three months, out of ninety-one families comprising three hundred and fifty persons, there were only fifty individuals who did not suffer some form of malarial sickness. The causes of this sickness are so obvious and so controllable that we beg to refer to the appended report which is mentioned for the lesson there taught concerning the official conditions by which a naturally salubrious locality may become so unhealthful that for at least one-quarter of the year it were better to abandon the place altogether than to live in it without the sanitary improvements which are clearly pointed out in this report as being an urgent duty of general obligation.

SANITARY SURVEYS AND MAPS.— DRAINAGE AND DRAINAGE AREAS.

In the first steps of procedure to remove or provide against the evils produced by faulty drainage, whether upon domestic premises or in extensive areas and whole districts, the experience of sanitary authorities is that it is highly important to have at hand, or prepare, certain descriptive outlines or maps of the premises or districts under investigation. This is true alike of the dwelling-house and entire blocks, the village and city quarters of some prevalent sickness, or an entire region or "drainage area" where miasmatic or other endemic diseases are complained of; and as there seems to be no exception to this rule, it is found necessary at every step of the improvements as well as investigations conducted by the State Board, to cause such outlines or "sanitary maps" to be prepared. With these in hand, the Board and all parties in interest can proceed with the local authorities to whatever works of drainage, sewerage or structural improvements should be undertaken.

In thus alluding to this general fact and the obvious importance of it, whether applied in the drainage, and even to the plumbing and sewerage of a house and a block, or to an unhealthful neighborhood or extensive district, there is one view of the duty and interests of both the State and local authorities in surveys, maps and drainage areas which is of the greatest practical and economical importance, namely, that, until now, there have been no such topographical and hydrographic surveys made under our State authority as in any manner will serve the sanitary necessities of communities in the works of drainage and sewerage they are ever projecting and beginning in a faulty and needlessly costly way, and there has been no such general survey and mapping by State authority as we now should have as a basis ready at hand for most important investigations into the local causes of destructive diseases, and for the guidance which should be given to populous communities in their works of systematic drainage, the public supply of drinking water, the selection of building sites and in their adoption of general drainage maps and regulations as a permanent basis of local sanitary protection and improvement. The "State Survey" and the "Adirondack Survey" begin to illustrate the fact that these kinds of work and expenditure by the state are certainly capable of a more generalized and specifie purpose of contributing to the means of health and welfare amongst the people.

This matter must before long so greatly interest the State government, because of its demonstrated importance and public economy, that there will be devised and ordered by general law such a system of surveys and mappings of populous districts, and of all the principal water-sheds and basins, or of the topography, hydrography and the economic geography, as shall supply this great general want in the public health-service of the State. Particular cities, as in Rochester, Yonkers and the Westchester wards of New York, have already secured good "contoured maps," but the twenty-one other cities have not, nor have any of the villages and townships, except that the United States Coast Survey has supplied the elements for town contoured charts in the vicinity of New York harbor. In thus mentioning a want which the State government alone can adequately supply, the fact is not overlooked that in the past studies and survey of the "Natural History of New York," these later behests of public health, and the almost infinite wealth of the economic geology of the State had not laid claim to the State's attention. This Board, therefore, respectfully submits for public and legislative consideration, this urgent and perpetual need of a correct basis of expenditure and works for the public health, and would request, beforehand, that whenever the State orders its economic geology and topography to be surveyed and mapped, the requirements of the public health, as herein stated, shall be met.

SEWERS AND THE SEWERAGE PROBLEMS IN THE LARGE VILLAGES AND SMALL CITIES.

As stated in the preceding section, the very first step in the problem of sewerage of villages and cities depends upon a correct topographical map of the area to be sewered. It is a singular fact, however, that only a few of the cities and villages in this State have provided such a basis for correct procedures in their sewerage. It is further true that the introduction of the public water supply has, in nearly every instance, preceded the adoption of a plan of sewerage. Pernicious results, therefore, have ensued from water-soakage and wetness of the grounds around dwellings and under them, thus giving rise to local conditions adapted to induce house-epidemics, not only of acutely destructive diseases, but of pulmonary and constitutional disorders, which terribly discount the value of human lives as well as greatly abbreviate them.

In recommending and adopting plans of sewerage, there are plainly certain perils no less than obvious advantages and claims of decency to be considered. The advantages are :

(1.) The removal and riddance of all excremental and filthy outflowing from dwellings and premises to such distant delivery as the plan of such water-carriage of the sewage-matter shall provide for.

(2.) The water-carriage itself, in the plans for such removal, is in many places a convenient means of riddance of the overflowing abundance of the water as supplied in the house and upon the premises.

(3.) The more or less complete removal from the entire areas of the habitation and of the village and city, of sewage matters they discharge into the public waters beyond such limits.

The perils against which but little provision hitherto has been made in the general plans of sewerage and drainage of our cities and villages, as now witnessed in more than nine out of ten, are probably:

(1.) Conspicuous failures to provide properly for the ultimate outfall or disposal of sewage matter.

(2.) As shown in this Board's report last year, the combination system of sewage with adequate capacity to receive all storm-waste as well as the little stream of mere sewage, which sewer as the subterranean conduit in a village as well as in populous city streets, results in considerable harmful risk from accumulations of decomposing sewage during the intervals of the water-flow, chiefly dependent upon showers and storms; a peril which may be obviated in a great degree by adopting this separate sewerage system.

(3.) The faultiness of sewer connections at and within houses that are sewered, and especially the defects and faultiness of sewerage and drainage, or what is known as house-plumbing in dwellings.

The discharge of sewage, carelessly, into running streams and other public waters which are subject to daily use as drinking water and for other domestic purposes, is perilous and wrong ; although but a small number out of any particular thousand people who drink the water polluted by thousands of other persons' excremental outflowing — unspeakably filthy as such a practice is — may be killed in any one year by this means, and it may not come to be proved that a person was so killed, or was harmed, yet such a practice is dangerous and should be restrained and wholly prevented, or so guarded and corrected as to overcome any cause of harm.

Concerning conclusions the Board has already published in relation to the grounds for the preference of separate sewerage and the most economical, thorough and cleanly methods for the water-carriage and disposal of sewage matter, the Board would, in this report, reassert the position it has assumed and the reasons it gave for advocating the adoption of the "separate system" of sewerage for large villages and small cities in the State.

In the investigation of sanitary wants of school-houses, there has been found to exist a most urgent demand for thorough reform in the facilities and methods in detail for answering sanitary, and for that matter even the physical and moral conditions of school-houses, sinks and sewerage.

HOUSE-DRAINAGE AND SEWERAGE.—THE SANITARY PROBLEMS OF HOUSE-PLUMBING.

Among the luxuries and comforts of modern civilization, in the domicile and all great resorts for recreation, business, rest or travel, none at present are more studiously and expensively the subject of provision, construction and adaptation, than the fixtures, etc., which are known under the title of "house-plumbing."

Though the analogues of this luxury of the modern house and place of assemblage were found in Rome and in the cities and palaces of the Roman Empire, in its Golden Age, the Forum for the daily great assemblies and the vast amphitheatre of the Coliseum being outfitted, at immense cost, for the accommodation and physiological necessities of the assemblages of tens of thousands, structural questions, which are at present discussed with extreme difference of opinion and assertion. will have to be settled upon a basis of scientific and experimental judgments which certainly are now entirely possible and urgently demanded.

By a series of experiments, skillfully devised and scientifically conducted by the most practical sanitary engineers, conversant with all the details of the plumbing art, under auspices of the National Board of Health, in Boston, last summer, there were demonstrated the conditions under which nearly every form of modern waste-pipe traps, used in dwellings and hotels, are in daily experience "syphoned" and rendered useless. At the same time the conditions were clearly demonstrated under which properly adjusted traps may be securely kept sealed and effective.

While not a few persons have deemed it a duty vehemently to denounce all attempts and methods of constructing within any domicile or house, the lavatories, baths, sinks, water-closets. etc., which modern convenience and comfort certainly will not relinquish, the question arises, as one of paramount importance for sanitary advisers and investigators to determine as correctly and promptly as possible, whether it is practicable to adopt and regulate the needed structures for all the purposes here mentioned within dwelling-houses, hotels and public institutions.

It seems to be a duty incumbent upon sanitary authorities, and especially upon this State Board of Health, which in some sense has advisory relations to twenty-four cities, and hundreds of populous villages, to be prepared at all times to take the most correct view of this important general subject of domestic sanitation. Without discussing in this connection the reasons in detail for the opinion here to be expressed, this Board's opinion and belief is, that all the requirements for the entire security and welfare of families and inmates of all classes of dwellings and institutions can be attained, and the buildings be made subject to such inspection, prescribed regulations and record as to give full warrant to families and occupants, that they are rightly outfitted and regulated in their entire house-plumbing, and that so far as these fixtures and necessaries for cleanliness, health and comfort are concerned, all the sources of peril are overcome and prevented.

Though it be true that there is comparatively little of such correct plumbing and domestic protection at present, the practical science and art for providing it already exist; and plumbing as a trade and art has rapidly become an honored guild in the cities of New York and Brooklyn under the influence of the timely and judicious legislation by which the State of New York has required the protection of the public and domestic health in those two great cities. Conspicuous opposition to the reforms required and enforced under the metropolitan plumbing law has been overcome, together with the "scamping" and ignorance that have been superseded by skillful and honest workmanship in this most out-of-sight and much-abused handy work of contractors in the construction of modern dwelling-houses.

Numerous discreet and public-spirited citizens in different parts of the State have, again and again, suggested to the officers of the State Board of Health that a faithfully administered sanitary law for securing mechanical and hygienic perfection in house-plumbing work ought to be enforced in every city and village in the State. It is not impossible that this will prove to be the *dernier resort* for securing protection against frauds and ignorance in the work of our dwellings and public houses, and their sewerage.

It is claimed by the advocates of such a generalization of sanitary laws and regulations to protect the health of hotels, school-houses and other public resorts, as well as dwellings constructed by contract, that without the operation of such a protecting authority, the most precious lives will be liable to unguarded exposure to causes of unexpected fatal disease.

This view of the subject is certainly worthy of consideration, and it would be fortunate if a practicable way is devised for realizing the protection thus claimed for human life and health. Until there is some such general provision of law, local sanitary authorities must do all in their power to secure attention of householders and the faithfulness of builders and plumbers to guard against the dangers that lurk in all the emunctories and outflowing of the common dwelling-house and places of large assemblage.

In concluding this brief chapter, attention must be called to the fact, that wherever there is an attempt to provide cloacal and waste-pipe conveniences without a copious water supply for frequent daily flushing and cleansing on the one hand, and on the other, wherever there is not a sewerage and drainage system provided upon the premises, and in the streets where water is laid on, in and about the buildings, there will be such liability to wetness of grounds and premises as to induce fatal miasmatic conditions. In short, the luxuries and means of health and comfort for modern civilization call for vigilance and skillful adaptation without which the wilderness itself may be more healthful and inviting than the most costly mansion and opulent city.

TENEMENT SANITATION. REGULATION AND SANITARY SUPERVISION OF TENEMENT-HOUSES.

More than in any other State in the Union, the poor and nearly all the laboring classes in the chief cities of New York are domiciled in tenements at monthly or weekly rental. The statute relating to tenement-houses in New York and Brooklyn defines them as dwellings in which "more than three families, living independently of another, and doing their cooking upon the premises," etc., hire or lease their homes. The first law for the sanitary regulation and protection of this class of habitations in the metropolitan district was enacted in 1867. Evils which then had been scarcely twenty years in progress, or that were scarcely noticeable elsewhere in this State than in the two cities just mentioned, have rapidly grown with the increase of city populations, until now in at least seven cities and a greater number of manufacturing villages the crowded tenement houses are obvious sources of danger to the public health.

As more than half the inhabitants in this State reside in cities, and as the number of families that live in tenements in which they have no ownership or abiding interest, is rapidly increasing, we deem it a public duty to invite the serious attention of the Legislature to this subject and to the urgent necessity for extending the provisions of such a statute to all cities and incorporated villages of more than ten thousand inhabitants. By the same law the sanitary regulation of common lodging-houses would be provided for, and as this class of disease-breeding places have recently become sources of danger within the jurisdiction of town boards of health, the latter should be required by law to enforce the same sanitary rules as would be required in cities and large villages. In one such lodging-house or shanty occupied by railroad laborers the past summer, this Board found that four deaths from fever had occurred in a brief period, and that the last one certainly died of typhus. Presumably all died of the same contagious malady, though the non-medical coroner certified them as cases of typho-malarial fever. The communities of the State, separately, may, at times, be utterly powerless to protect themselves against contagious and filth-diseases of the unsettled and itinerant people who crowd the cheap lodging places along the great thoroughfares of the State. This Board has found it absolutely necessary during the past year to invoke a great number of local sanitary authorities and large employers to inspect and regulate the lodging places of laborers. Skilled inspectors have been sent by the Board to aid in this duty, and this experience as well as that in the crowded and unregulated tenement-houses in the cities and manufacturing villages warrants the application of an adequate general law which every local board of health can administer, and which the State Board shall invoke with adequate authority whenever the public safety requires.

RAILWAY TRAVEL SANITATION. STATIONS, PASSENGER COACHES, SICK PASSENGERS, ETC.

The millions of passengers who travel upon the railroads during the year represent an aggregate of life and health interest which is worthy of all the protection that can be secured. Fortunately the chief railway corporations and superintending officers respond to any well-authenticated official sanitary requests; yet, in this State, there is no such specific provision of law, as experience has shown to be necessary, to secure adequate protection to the health of passengers. The conditions to be improved and the evils to be prevented relate to the ventilation and systematic cleansing of all passenger coaches, the care of sick or injured passengers, the effectual vaccination and protection of life of railway employees and the sanitary supervision and policing of railway stations.

Without any disagreeable interference there can and must be a great improvement in regard to each of the conditions here mentioned. Self-interest and a commendable regard for the comfort of passengers, have greatly diminished the evils which public carriers formerly imposed upon their passengers, yet the existing evils seem to demand reform by exact sanitary regulations, which no competent officials in the passenger department of railway service could consistently decline to enforce throughout the extent of their lines. This Board has already advanced its inquiries sufficiently to promise a useful presentation of the subject to the railway officials and, if need be, to the Legislature.

The facility with which even a reckless person with small-pox may take his seat on a couch in a coach amongst a crowd of other passengers was illustrated in the case of James Weston, who with the coach he occupied was ordered by the Board to be instantly shunted from the train on which he was discovered on entering the Hornellsville station, after riding all the way from Cincinnati. The possibilities of the contagion of disease being unsuspectedly conveyed are confessed, and they should be prevented as far as practicable by sanitary cleansing of all the coaches. Even in the instance we have mentioned there were garments hastily locked in a satchel of an alarmed passenger near the sick man, and after thirty-two days the garments and satchel were, for the first, opened in an isolated dwelling in Schuyler county, to become, unsuspectedly, the focus of a destructive scourging by small-pox.

The sanitary requirements of cars and stations in the matter of ventilation, healthful warming, necessary conveniences and policing should be secured upon all railways. The security of trains and the precious human freight they bear can be vastly enhanced by the business-like adoption of certain well-ascertained physiological facts in the rules for the selection and the prescribed service of each class of those employees whose default in duty have hitherto sacrificed so many lives by the preventable disasters of the trains. It is not from want of willingness and desire to be faithful in duty, but from want of the actual physical conditions or of the training and complete fitness and government of the persons who so fail in the service on which life and limbs of passengers depend, that the preventable casualties occur. The result of a fair presentation of these facts to the railway officials by this Board will be ascertained before any special law upon the subject is reported to be necessary. It is hoped that even in the prompt adoption of some kind of signal-brush to save the lives of freight-train brakemen and others on top-service when approaching low bridges, will be voluntarily undertaken by the road officials. Like the duty due to engineers and the switch and signal-men, in allowing and even requiring rest and strict habits of routine for them, for their welfare and the lives of passengers, so, for the saving of train-men from mutilation and death, and their families from desolation and want, all necessary precautionary means should be taken to prevent harm to them.

THE STATE QUARANTINE SYSTEM. SANITATION OF EMIGRANT SHIPS AND EMIGRANT TRAINS.

From Colonial times until the present day, the quarantine system of the port of New York, the State legislation under which it has been developed, the vast interests of the world's commerce that have demanded the adjustment of this system and the laws relating to it, and the interests and rights of maritime trade, together with the necessity for protecting the public health, not only of the State, but of the entire country, and the marine hygiene of commerce itself, have given to this system a degree of completeness, and, in many respects, a wise adaptation, which must be considered as highly creditable to this Commonwealth.

When, in 1799, the Legislature of this State caused the purchase of an extensive tract of the most beautiful part of Staten Island, upon its eastern water side, for the exclusive use of the quarantine station, nearly eight miles away from the city of New York, it was no doubt believed that this quarantine hospital establishment would be sufficient in extent, and would continue to be sufficiently remote from the metropolitan population to afford the desired security against exotic contagions and the diseases which are bred or carried in ships.

The millions of emigrants who have been brought under sanitary observation at this station, and later at the new station, several miles down the bay, have presented their special separate sanitary necessities, quite different from those which the ships and cargoes infected with yellow fever have required; yet the State has munificently provided for each of these urgent demands of maritime sanitation. Two amply-extensive islands have been constructed, at great cost to the State, in the midst of the lower bay, two miles and more off the shore; the Health Officer's residence and official station were some years ago established near the Narrows, nine miles from the city. With these facilities for administrating the State and National quarantine regulations, at a distance sufficiently great from the metropolis, the two millions of people in the metropolitan district have for many years past reposed in safety from exotic contagions; while the restrictions and embarrassments incident to quarantine regulations have become less and less onerous. There yet remains a great defect in the laws and methods by which the quarantine system is supported in this State, and especially with reference to certain sanitarily essential provisions for the maintenance of emigrants and others who should be detained, cleansed or vaccinated, as the case may be, to secure the general protection of the public health as well as their own protection. As the necessary authority to so detain and incur, occasionally, certain expenses for the general welfare will have to be a matter of statutory enactment by the State or the National Legislature, or both, this Board finds it a duty here to urge, that it shall be provided for without longer delay. That the State will not fail to protect its chief port and the entire line of exposure of which it is the center, so far as it relates to exotic sources of yellow fever, there need be no doubt. Entire success has crowned its efforts in this respect. For a long time past the State has actually capitalized the means for such success in constructing its two quarantine islands in open tide-way in the midst of the lower bay, and a well-selected station at the entrance to the port of New York.

Henceforth the leading question will be, so long as foreign emigration continues at its flood, how shall complete immunity be given to the pathways and first lodging places of the immigrant population, that passes by the thousands weekly through the landing places of these people, as respects the contagious diseases they frequently bring with them? Cleansing, disinfection and vaccination must be practiced even beyond the extent of any existing provisions of our statutes.

This Board, from its organization, has undertaken to induce the necessary official and commercial action to secure the result here predicated as dutiful and necessary for the State and toward the entire country. The Health Officer of the port, as a member of this Board, has loyally aided and led in this duty, for it and the State. In his special statements, as chairman of this Board's committee on quarantine, as published in the first two annual reports of this Board, the natural and present situation of these questions before the State and country at large have been lucidly presented.

In an appended chapter to this report will be found still further information upon this subject, especially in reference to the effort to secure adequate sanitary observation and care of emigrants *in transitu* from the seaboard westward. A line of special sanitary inspection and care of emigrants before passing the western frontier of the State of New York was undertaken early in the summer of 1881, and has continued until the present time, with considerable interruptions. On June 1, 1882, this duty of inspection was organized on a systematic basis in reference to the co-operation of several other States that are from time to time imperiled by the contagious diseases of emigrants.

The National Board of Health undertook to lend its generous aid in this work, and for several months that Board paid a moderate stipend to the medical inspectors of emigrant trains employed in this and the four or five other States which united in the plan adopted in New York. Embarrassments in the finances of that Board, however, left this kind of inspection in our State to be maintained independently. The National Board has, however, continued to pay the expenses of one inspector at the quarantine station, with instructions to do whatever is possible, under direction of the Health Officer of the port, to increase the security of the entire line of emigrant transportation against small-pox.

The Health Officer, Dr. William M. Smith, has succeeded in securing a vast improvement in the sanitation of the emigrant ships entering the port of New York, especially in the matter of vaccination and re-vaccination of emigrant passengers on board, yet he reports and continually deprecates the culpable ignorance, unfaithfulness and neglect which continues to characterize the so-called vaccination of emigrant passengers. A duty of the utmost nicety and the most responsible of any that ships' surgeons, medical officers and physicians ever perform, is still attended to in an indifferent and unworthy manner, producing publicly harmful results. The whole subject of vaccination as an obligatory duty, or as a medical service in any manner discharged under public instructions, must be more worthily conducted, even if penalties for professional indifference to the duty have to be imposed by law.

This subject in its wide extent and general relations to the protection of the public health, and the obligations of State and local authorities, is further exemplified and discussed in a subsequent section of this report. Before dismissing this topic, the Board would here mention with the satisfaction with which it has to acknowledge the prompt acceptance of the onerous and unpleasant duty of receiving — on telegraphic communication — emigrants found on board trains *in* *transitu* westward, sick with small-pox, by local health authorities at Buffalo, and others dangerously sick with diphtheria, or with certain acute contagious fevers at certain of the villages and cities where the medical inspector of trains has telegraphed his request ahead, to secure the acceptance of the sick and their domestic quarantine for the sake of the sick, and the sanitary safety of the moving company of emigrants.

Nothing could exceed the consideration and munificent preparation which the town of Niagara (the most exposed to dangerous exigencies incident to emigrant travel of any place, excepting Buffalo, upon the western frontier of this State), has made for meeting every exigency of this kind, for it has constructed a contagious disease refuge in a ten-acre field, leased for the purpose for a term of years, and offered to this Board all the facilities so prepared. The hospital of St. Mary's, at Rochester, also, through the health commissioner of that city, has received from trains patients thus removed, on request of the train inspector. While at Buffalo, the municipal health officer has responded to requests telegraphed by the train inspector an hour in advance of the incoming emigrant train, and held the small-pox ambulance in waiting at a turnout near the station, to receive cases of small-pox discovered in the moving company, at the same time adding to this service the disinfection of cars and equipage.

This service rendered by local health authorities is in striking contrast with the earlier experience of previous years, when train officers, unadvised, upon discovering small-pox among the passengers, were not only panic-stricken themselves, but, by repeating their words of fear, caused panic at every station for hundreds of miles, and at last let the sick and their contagion pass across the western frontier. It is believed that an end has been put to this source of danger, and that no discovered cause of contagion will be allowed to pass over the boundaries of this State. The fact must here be mentioned, to the credit of the public carriers and others, that a loyal disposition has been manifested by them to strictly comply with all the regulations for the protection of the public health.

Such are the existing facilities for rapid transit from ocean to ocean, and from continent to continent, that contagion current in cities upon the Atlantic is soon current in those upon the Pacific coast and along the whole line of railway stations for three thousand miles; while contagions current on the continent of Europe again and again have proved how readily they can become current in our own country. Thus it is every year demonstrated that municipal and State sanitary regulations are essentially necessary as a basis of interstate sanitation and international protection to the public health; while the State and national regulations already have begun to establish the basis of, and prove the necessity for, a concession of international sanitary law and practice as a basis of assured protection of life and health and of the world's travel and commerce.

The State Board of Health of New York has not been unmindful of this world-wide obligation of the sanitary service which it in part administers, and concerning which its counsels have been widely sought and most carefully given.

THE SMALL-POX SCOURGE.— THE PUBLIC DUTY OF AND PROVISION FOR VACCINATION.— BOVINE VIRUS AND PUBLIC HEALTH INTERESTS CONCERNING IT.

The scourge which in successive centuries decimated the people of Europe, and elsewhere also destroyed millions of the human family, sweeping entire tribes into oblivion through the most horrible death, yet perpetuates itself in all countries by its loathsome contagion. What small-pox began to do and what it threatened in the State of New York since this Board obtained the organization and coöperation of local boards of health have been referred to in a preceding section. It remains to be stated that certain great interests of the State now demand that these lessons of experience, and the present advanced condition of both the knowledge and means for giving complete protection to the entire people against small-pox, should be the warrant for adopting all the necessary resources of medical science and of sanitary administration to give such protection.

This Board has, from the date of its organization until now, vigilantly watched for the discovery of all unguarded sources of small-pox contagion, and has offered to the people throughout the State all the aid, instruction and official authority it could command to control and prevent this scourge. The local boards of health and the people generally have heartily seconded this duty of sanitary officers. Even in the few instances that disputants of such duties — the anti-vaccinationists — have objected to particular sanitary regulations, such opponents have quickly subsided, and in several instances have personally thanked the officer of this Board who met their objections and secured compliance with orders. The people are prepared and waiting for the best laws and sanitary regulations that can be carried out in this State for entire protection against small-pox. The occasional exhibitions of personal skepticism concerning the protective influence of vaccination are as nothing in the balance when the confidence and experience of the people supports the conclusions of sanitary science and the recent provisions of law, as well as the regulations and instructions by which vaccination and re-vaccination are made obligatory. The suggestions here to be offered, for the purpose of perfecting the public health service in regard to the means for complete protection against small-pox, relate to the duty and methods of the State and the sanitary authorities rather than to any contention with the people in regard to what should be done. In the presence of a destroyer so hideous as small-pox, and with means of protection and entire immunity against it which sanitary science has made trustworthy and complete, this Board has addressed itself to the people of every school district in the State, announcing in few words and the printed regulations authorized by statute, that all attendants at the public schools should be vaccinated; while through the local boards of health the same counsel has been accompanied with this Board's assurance that vaccination and the full protection by re-vaccination must be placed upon the footing of obligatory sanitary duties. Neither the local authorities nor the school officers have demurred. The practical questions that have arisen are duly noticed in the points here to be stated. The Legislature has authorized the public school officers to require the presentation of evidence of vaccination as a condition upon which the attendance of any pupil shall be allowed to continue after due notice to families. All local boards of health are empowered to provide for the necessary vaccination at public cost for the vaccinal matter and service. These boards also have ample powers to quarantine and restrain from any dangerous intercourse the persons, places and materials deemed capable of infecting others; and, in addition to this, experience has proved that in the central relation of the State Board to the local authorities and to the protection of the public thoroughfares against the contagion of small-pox, it is occasionally necessary to require that persons and things infected shall be so transferred, from trains, etc., to the local sanitary authorities at the nearest station where the State and the local board may have means for giving the required care. Three cases of small-pox have been found and so removed from express trains during the past year, the notification to and advice from this Board being by telegraph, while the hazardous and costly service was borne exclusively, and without demurring, by the place and its health authorities to which this Board consigned the sick and their infected baggage. In one instance the cost in cash, exclusive of a fortnight's medical attendance, was nearly $50. In another, a citizen of Albany county, en route from Cincinnati in a crowded express coach, the eighth day in his small-pox, was ordered removed at the Hornellsville station and transferred to the contagious disease refuge of the town, where he soon died, and where an attendant of the abandoned railway coach also lost his life from the reckless traveler's contagion. In addition to the cases of small-pox, the Board has provided for similar transfer and care of other dangerous contagions, and in order to be ever ready to meet such exigencies and deal justly with local authorities, this Board would, if authorized, certify all accounts of such costs as are necessarily incurred by them, and pass the same for payment out of any funds which the State will make available for the purpose. Inasmuch as the Board has supplied every town and village in the State with exact practical instructions and descriptive plans and illustrations to enable them to provide and be ever ready for the sanitary care of the acute contagious diseases, and may now as readily communicate with local authorities by telegraph as by mail, all the promptitude and authorization necessary for perfecting such occasional service for general sanitary protection are now practicable.

The important question is now asked in every community, What can be effectually done, by State or local measures, to induce all classes of people to attend to the duty of vaccination, and especially to make perfect the vaccination of children? This Board has been led to consider this question very seriously, as every outbreak of small-pox that has extended beyond the first household has revealed the fact that in particular districts so affected there had long been a culpable neglect of vaccination in the families. To this fact has usually been added convincing evidence that re-vaccination has been equally neglected, and, likewise, that spurious and utterly deceptive kinds of vaccination have been extensively practiced.

The proper answer to the question, What can be done to perfect the general vaccination of children? is now to be found in the adoption of some system of notification, advice and obligatory attention, which shall omit no family or custodian of children, and which shall, as shown in a report by the Secretary of this Board at its quarterly meeting in August, 1881, use the public registry of births in every town, village and city of the State as the lawful directory and basis for such notification, and also employ other available means for reaching every family, asylum and school. This can soon be wrought into a system acceptable and adapted to the people, and in due time whatever enactments of law are desirable, will be asked for. The Secretary of this Board, acting as Superintendent of the State Bureau of Registration and Vital Statistics, will be directed to organize this service so as to unite all the registry and health officers in the system of notification, information and record. It is believed there may be no less success in New York than in Scotland under such a system to secure the vaccination of young children. Experience has shown in the latter country that not less than ninety-six out of every one hundred infants recorded in the birth registers are successfully vaccinated before their first birthday. The few details and essential features of the system as adopted for this State are presented in the report above referred to, as appended in a subsequent chapter.

Thus far in its official dealings with the people and all local authorities in matters relating to the suppression of small-pox and to the presentation of vaccination as an obligatory duty incumbent upon every community and household, the officers of the Board have proceeded, and all utterances by authority of the Board have been, upon the basis and full belief that the State requires not only the absolute and instant suppression of all contagion, but the prompt and effectual vaccination of every human being, even though he bear the marks of small-pox. That the individual receptivity for the contagion be, if possible, utterly extinguished being as much an obligation in civil life as it is conceded to be in armies and navies, the duty of re-vaccination for this purpose is enjoined and explained among all classes of people. Alas, while thus officially instructing and assisting the vast population of our State in these duties which we regard, and teach them to regard, as being in the highest sense obligatory and to be neglected by none, the mode of medical and even of the official performance of vaccination, the obligation of local authorities and of the State itself to secure the assured means of success and perfectness of the marvelous attributes of kine-pock in all vaccinations, and the necessity of absolute confiscation and prevention of all spurious vaccinal virus, yet remain to be provided for by authority of law. As a statesman in public health government, Mr. Simon, of the English sanitary service, said in his report to Parliament: "No principle can be more obvious than this: that if the State professes to vaccinate the people, above all, if it compels the people to be vaccinated, it must take every possible security for the excellence of the vaccination it offers." And he adds: "What has to be administered is not a mechanical matter of routine, * * * but a system which from beginning to end, and from center to circumference, requires in all its parts to be vitalized by the science of medicine." Holding, therefore, that what the laws "invite and compel the people to accept shall be at least of good quality," this Board now submits the following propositions as fairly expressing the principles of sanitary duty concerning vaccination and the lawful measures for making it obligatory :

1. The skill and carefulness, as well as the perfect purity and efficiency of virus required for securing genuine vaccination, demand the watchful and systematic attention of boards of health. For this reason every board of health should provide ways and means for speedily supplying fresh vaccinal lymph of highest excellence, and, by its medical officer, should be prepared to offer free vaccination and to give practical instruction in the duty and the art of vaccination.

2. The vaccination of infants within a few months after their birth is so necessary for their own and the public protection that it is a duty of the State to adopt a system of notification and advice to parents and physicians to secure the timely vaccination of infants. This duty is so readily associated with the registration of births, and, later, with the first entrance of the child as a pupil at school, that no practical difficulty need be experienced in securing the general vaccination of children. After all, it is sure to be found less a matter of compulsion and penalty than of enlightened and patient official and professional administration of a supreme hygienic and public duty, by which vaccination thoroughly good and universally practiced among all classes is to be secured.

3. Ignorance and indifference in the medical application of vaccination, whether in public or private practice, must, as far as possible, be prevented. Boards of health, by a perfect example in the practice and instructions publicly offered, and medical schools and all dispensaries and physicians, owe to the people such instructions and examples, and with this in view, they should provide for scientific and practical instruction in the principles and art of vaccination.

4. Spurious vaccination, and every form of impure, unattested and untrustworthy vaccinal virus must be excluded from use, and, to this end, all the various sources or stocks of virus offered for sale, or for gratuitous use, should be subjected to such occasional and conclusive tests as shall determine the actual quality and validity of it as vaccinal matter or kine-pock. This duty may justly be required at the hands of the State Board of Health by any means it shall devise and make entirely practicable, as aided and made effectual throughout the State by the local sanitary authorities. Bovine inoculations, and close inspection of the development of the kine pock, being the means for testing the validity and qualities of the animal vaccine matter; and, for the testing of humanized vaccine, the daily close observation of development of vesicles and areolas, and the subsequent verification by means of the bovine virus of proved efficiency being conclusive, the actual quality and fitness of any vaccine matter, so called, which is offered or found in market, may readily be tested. Such verification, when made by authority, and as a public health duty, will be trustworthy and final, and should result in the exclusion of all kinds of spurious and faulty vaccinal matter wherever found and however disposed of or offered within this State.

5. The cultivation and public supplying of virus by the direct and continuous inoculations of heifers has so universally superseded the taking of vaccine lymph from infants, as practiced in this country until very recently, that the hitherto unguarded traffic in bovine virus calls for a systematic regulation which shall be adapted wholly to exclude from sale and use any and all spurious and deteriorated stocks

of this kind of matter, first, by the official testing as defined in the preceding section, and second, by means of proper encouragement to the perfect culture and supply of bovine vaccinal virus of absolute purity and greatest efficiency. The proposed testing of the validity of all stocks of so-called virus offered as an article of traffic, and the maintenance of the needed investigation of the sources and production of the bovine lymph, with the design to secure the greatest excellence of vaccination throughout the State, may be the most effectual means for encouraging the best production, and practically excluding the spurious and deceptive, or dangerous stocks of animal virus that become a matter of sordid traffic and execrable fraud and harm. Fortunately, the best trusted of cultivators of bovine vaccinal virus, so-called vaccine farmers, can always be relied upon to assist in exposing fraud and the sources of spurious supply, in the demands for the protecting virus; and the medical profession and all local boards of health desire and need the influence of such official methods as shall prevent imposture and disappointment in vaccination.

6. In the effort to induce the medical and official action which shall render the protection against small-pox universal and perfect, this Board will undertake some investigations in regard to the causes of default and neglect in vaccination, and at the same time organize and promote others which shall tend to perfect the culture and distribution of pure and efficient virus, and establish a public record of the examples of highest success in vaccination as proved by the statistics and results of vaccination in successive years. The medical officers and boards of health, and even the records and studies of physicians in numerous communities, may thus contribute the very knowledge and testimony that will be most useful to the people.

In attempting to give practical effect to these six propositions it may be necessary to obtain authority from the Legislature to interfere with and suppress the traffic in spurious and harmful vaccine matter, as well as to encourage the perfect culture of vaccinal lymph, and, in suitable ways, to reward the most complete and useful examples of success in the public duty of vaccination. This Board will make known to the Legislature whatever is ascertained to be necessary in this matter.

Certain Improvements of Laws Needed.

The laws relating to systematic drainage.— As the General Drainage Act of 1869, with its various amendments, has failed to work satisfactorily, chiefly because the preliminary procedures for the organization of special commissioners, the searching of ownership titles, the deciding of the questions of sanitary necessity and of plans for proposed drainage, the determination of damages and assessments, and most of all the raising of funds, upon local securities for the execution of the work, as well as for the preliminary surveys, etc., have brought every such drainage commission under severe censure and revealed some alleged fault of administration of the trust. It is believed that the sanitary facts as well as the preliminary problems of drainage engineering should be brought under such review as would, in each case, leave no doubt in regard to the necessity and the most effectual and economical plan for the proposed drainage, and that from this point in the procedures to secure sanitary drainage the local sanitary and administrative authorities should be charged with all practicable responsibility in the work, while the State should offer as well as require the expert examination and approval of the plans in detail, previous to their adoption and the execution of the work. Errors, failures and waste could thus be prevented, and the coördination of any amount of drainage in contiguous civil jurisdictions secured.

In all plans and propositions for sanitary drainage, the very first necessity is that of a correct survey and map which shall exhibit the geological and topographical facts clearly, and show precisely what are the best natural outfalls for the drainage streams; and it will be fortunate if the State Survey Office and the Bureau of the State Engineer and Surveyor shall be able to offer such aid in the topographical engineering, and if the State Board of Health can give adequate assistance and acceptable conclusions upon the chief questions relating to the sanitary requirements. It is believed that until the topography and hydrography of the State, at least in its populous regions, shall have been thoroughly surveyed and mapped, the best adapted and most useful law to encourage and provide for systematic sanitary and general drainage in towns and districts must subsidize such central resources of engineering and sanitary science as the State has for the time at command, as here suggested. The Board considers that this is a vitally important matter, as the sanitary fact is well attested that imperfect or half-way drainage is, in many a locality, worse for the public health than no drainage, and that the increase and unlooked-for extension of malarial areas largely depend upon just such interferences with ponds, pools, swamps and the oscillating ground-water of porous soils as result from such kind of half-way drainage. Even where this process, as seen in the water-storage and fluctuation of ponds and streams, is that of alternate flooding and drawing off or lowering of the water, the public health interests demand that whatever general drainage is undertaken, either for health or wealth, should be correctly planned and effectually executed.

The General Drainage Law of 1869 was not to be resorted to in any instance except where the public health requires,* yet it provided for no official sanitary testimony and concurrence. The purposes of that law, and of any good law that shall supersede it, certainly require that official examination and conclusions should be had upon any drainage problem undertaken by the commissioners under the law. Such services can henceforth be given by this Board, but the preparation and execution of the needed plans for drainage of towns, etc., may require expenditures which should be always judicially authorized. The outlines of a suitable form of law to provide for and authorize such works will be submitted to the legislature by this Board.

Law to prevent the pollution of drinking waters.— It is believed the time has arrived when the local boards of health, sustained by such aid as the State Board can offer, should be charged with the duty of enforcing compliance with a reasonable general law to protect the supplies of drinking water from dangerous defilement. Such a statute, if wisely devised and guarded, would serve both to instruct and protect the people. In several of the most fatal outbreaks of disease in households and neighborhoods, the water for domestic use is discovered to be polluted and poisoned by excremental and other filth. The people will gain much from the warnings and suggestions of such a law as may enable the public health authorities at times to prevent or arrest fatal outbreaks of sickness.

---

* * * Any person or persons who shall deem it necessary for the public health that any such swamp, bog, meadow, or other low or wet lands shall be drained, may present a petition, duly verified, to the county judge of the county in which such lands lie. (See section 1, chapter 888, Laws of 1869)

The prevention of obstructions and nuisances in streams and watersides by decaying mill-waste, etc.—This Board has received, through the Governor and otherwise, several complaints and notices of local suffering in consequence of the obstruction of water-courses and of the occasional drying up or lowering of ponds and lakes as well as by the overflowing of them by means of dams or other obstructions.

These evils, though various and quite diverse in their special character and causes, may, it is believed, be treated under a guarded and readily applied statute. Such a law should be adapted to apply as well to a series of similar evils that may be found extending through adjacent towns and counties, as to a single well, lake or water-course exclusively and in a single town or village. Incidentally, or as a chief cause of sanitary and judicial interference, the action required may be for the protection of the drinking water as used by a village or neighborhood. Yet for the protection of public health, whatever be the cause for action, the scope and extent of the authority exercised must be adequate to prevent and control the causes of the evil suffered and complained of.

To this end the local health authorities, as well as the neighborhoods separately concerned, must be so enlisted in their own defense and welfare that any general or local official instructions and orders will be obeyed with alacrity. As mentioned in a preceding section of this report the State Engineer and Surveyor, with the State Board of Health, should be enabled and, indeed, required by law to guide and give full effect to the necessary local and general orders by which such evils are to be overcome. The necessity of some such concerted action has appeared in nearly every complaint that has come to the knowledge of this Board. For example, upon the Saranac river, when the last and the largest in a series of lumber mills, nearly a hundred in number, between the Adirondack lakes and Lake Champlain where vast accumulations of saw-dust are rotting, was restrained by an injunction to prevent casting its saw-dust into the waters there at the mouth of the river, no action was taken and no method could be devised at the time by the local authorities or complainants at Plattsburgh to restrain the other mills from contributing their quota to the evil. Those mills are in five or six different towns, and in the towns where they are located, excepting in Plattsburgh and Schuyler Falls, no local evils from this cause are at present suffered by the inhabitants. The case in question was brought to the public notice by a public-spirited citizen of Plattsburgh, whose family and neighbors suffered much from the evil complained of. The result of the action was, that the judge declined to make the injunction permanent.* In a case at Fort Edward, Washington county, the people in the southern part of that village and on the river-borders of that town and of Moreau, Northumberland and Greenwich suffer from the same cause of this great evil. The board of health of the village of Fort Edward undertook, with great spirit, to abate the nuisance so far as it could within the close limits of the village and on one-half the width of the river. Fort Edward expended, during the year 1882, several thousand dollars in the attempt to control the decomposing mass of saw-dust extending over many acres and having a depth which resisted all force to dislodge it.

---

* A final procedure resulted in confirming the report of a referee to make the injunction permanent.

The greater part of the causes of nuisance are produced in the towns of Queensbury, Luzerne, Corinth, Hadley and still further north upon the upper Hudson. The farther up the stream the saw-mills are, the swifter the river torrents and the more completely free from any accumulation of mill-waste is the river. The people in the upper towns suffer no harm therefrom.

The inhabitants of a neighborhood and town where fatal sickness is caused by the alternate flooding and drawing off of water, often find they have no remedy, and that no local authority can in the least relieve or prevent the cause of their suffering. This is strikingly illustrated in the causes of a fatal epidemic fever at Indian lake, Hamilton county. The control of the outlet of that lake is held by private citizens more than seventy miles and six towns away. These hydraulic franchises need not be destroyed, yet the health and lives of people should be protected, by some adequate means which shall be entirely consistent with all the just franchises represented by mills and hydraulic rights.

Adequate control of such mill-wastes and accumulations of decomposing organic matter in streams and other open waters that are used for a public supply for drinking would prove to be an incidental benefit scarcely less important than that of protecting the atmosphere from miasmatic poisoning by the same cause. The outlines of a project of law to provide against and prevent the evils here mentioned will be submitted to the Legislature.

These three propositions in their relations to each other and separately considered. — This Board will doubtless find it a frequent duty to advise great discretion in the application of the powers under each of the three laws here proposed, should the Legislature see fit to enact them. Yet there is such obvious and urgent need that such powers should be reposed in the sanitary authorities throughout the State, under the safeguards herein suggested, that it is not safe to delay much longer the enactment of at least the guarded authority now asked for.

As regards any general enactment to provide for adequate treatment of natural drainage areas, which most generally exceed the boundaries of a village or township and frequently comprise fractions at least of contiguous counties, as well as adjacent towns, there needs to be competent and disinterested advice and means of final judgment upon each of the general drainage questions which arise. While the legislative powers, by the city charters, enable each city to attend to its own affairs in such matters excepting in regions immediately surrounding a municipal area, towns and villages at present possess no such adequate power and ability to make complete work in their drainage improvements; and inasmuch as a general drainage act involves towns and counties in difficulties inextricable, the very first provision for an acceptable method of inciting local endeavors by town and village authorities and real estate owners should plainly invite their hearty cooperation while securing them against exorbitant costs and needless delays. It is hoped this may be accomplished by the means suggested in the foregoing paragraphs.

In regard to the discretionary yet strictly necessary applications of the proposed law for preventing harmful accumulations of mill-waste and other decomposing organic matter in streams and other water-courses, there is a sufficient safeguard here proposed to prevent any unjust effect of such law. During the year 1882 there were more than ten or twelve such instances of harmful accumulations from mills, etc., which required the application of such a law. These cases were too important to have been neglected for a single year.

Concerning dangerous pollution of streams and other open waters, from which domestic supplies are derived, certainly a beginning must be made in the administration of a wholesome law which, in the present state of experience in local government of towns, villages and cities, may not be perfected except by the careful application and study of such lawful restraints upon sources of danger, which at present the people only imperfectly understand. For this reason, any law for preventing pollution of streams and other sources of drinking water may well be carefully defined and limited by the most competent judgment that can be made available, so that no possible misapplication of its provisions shall occur.

CONCLUSIONS AND RECOMMENDATIONS.

As required by section 11 of the Law of 1880, which defines the duties of this Board, the undersigned respectfully submit, as the conclusions and recommendations they now deem first in importance concerning the sanitary wants of the people, the particulars in regard to which further legislative action and precautions are deemed important "for the better protection of life and health."

I. That as regards the life and health of children, it is of the utmost importance that the homes of the poorer as well as the more favored classes should be thoroughly fitted for domestic health, and that as regards what are commonly known as tenement-houses, hotels, apartment-houses and resorts, their ventilation, drainage and sewerage should be constantly provided and regulated in accordance with obligatory sanitary rules prescribed by statute or by the State Board of Health; and that school-rooms should be constructed and outfitted under official sanitary approval; also that the cruelty to children which shuts them in to long continued daily tasks of labor in mills and shops should be forbidden by law.

II. That as respects the protection of households, schools and communities against acute contagious diseases that are liable to be spread from person to person and from place to place, the authority of the local boards of health and of school boards in regard to these dangers should be invoked and upheld in every community; and, if the Legislature will so provide, that the State Board of Health should have power, and that it should be its duty, whenever there is local neglect, to cause the said sanitary regulations to be faithfully enforced.

III. That, under a judiciously guarded central direction, there should be maintained, in cities, villages and even in every township, a sanitary inspection of school-houses, school-rooms, school-house drainage and appurtenances of schools and seminaries, both public and private and of every grade; and that this duty shall also extend to the determination of whatever means are necessary to secure protection against fire, against cold, and against overcrowding as well as against contagious diseases. That, at present, it is plainly a duty, as well as a most feasible plan for attaining this object, to require that every board of health in this State shall, in accordance with definite instructions and any necessary official aid from the State Board of Health, maintain a systematic sanitary inspection and oversight of all school-buildings and school-rooms, as an established branch of its official duties. It is recommended that this be required by law.

IV. That the maintenance of a strict supervision of a system of aid and advice in regard to vaccination and the exclusion of spurious or harmful vaccinal matter from sale and use within the State, the encouragement and regulation of general vaccination, and the prompt enforcement of appropriate penalties for any neglect to prevent exposure and distribution of the contagion of small-pox, should be required by law.

V. That in the course of investigations which this Board is pursuing in regard to the causation and the means of more certainly preventing infectious diseases, and in the progress of the researches which are being made concerning perfect supply and skillful maintenance of the kine-pock, or "bovine virus," this Board finds ample reasons for enlarging and continuing a special line of practical investigation and of necessary contribution of facts, now required by the medical profession for the public welfare, in regard to kine-pock, and a more complete protection of the people against small-pox. For this reason, a moderate expenditure is being made by the State Board of Health with reference to the proposed duty incident to these researches for the supervision and maintenance of the highest perfection and proper use of the kine-pock. A brief form of amendment of law will be submitted to the Legislature.

VI. That for the better protection of the families of the poorer classes, and an increased general security against the widespread prevalence of diphtheria and scarlatina in particular, and of certain other acute contagious diseases, it is recommended that in all cities, and in the populous manufacturing villages, there should be provided, under the supervision of the local sanitary authority, contagious disease refuges and hospitals, as advised and illustrated in this Board's second annual report, and as again presented in this report.

VII. That such provision for refuges and sanitary care should be promptly made whenever small-pox, typhus or other malignant infectious diseases occur within the State, and should be houses of recovery for the sick, as well as of effectual separation and control of dangerous contagions.

VIII. That for promoting and authorizing the sanitary drainage of sites of villages and hamlets, and of miasmatic districts, however limited or extensive, certain statutory provisions, corresponding with the specifications given in one of the concluding chapters of this report, need to be enacted by the Legislature. For this purpose, the outline for such an enactment is herewith submitted.

IX. That in the midst of existing controversies and much harmful practice relating to domestic sewerage and plumbing, there must be a competent and skillful supervision and the exercise of an official sanitary judgment in regard to the plans and execution of such work in all the cities, populous villages, hotels and public institutions in the State.

X. That in the administration of laws relating to the prevention of adulteration and harmful changes to which food and drugs are subjected, and in relation to the statute for preventing the sale and dangerous use of explosive illuminating fluids, the State of New York and its Board of Health seem to be constrained by the very circumstances of positive constitutional restrictions which prevent any tax for official inspection and permits of articles sold, to maintain all the necessary supervision and expert analysis and testing, as a general charge, which can be provided for only by a yearly appropriation of sufficient funds for the maintenance of this kind of service for the protection of the life and safety of the people. Adequate appropriations for this work will need to be annually renewed.

XI. Experience now shows that there is urgent need in all the populous districts of the State, and indeed wherever miasmatic and other localized outbreaks of disease occur, that systematic topographical and hydrographic surveys and maps should be made by the State, and that, as shown in a concluding section of this report, such local surveys and maps may readily be prepared with reference to the sanitary topography and geography wherever there is provided a well-devised survey and mapped description of the topography, hydrography and economic geology of the State. Therefore these sanitary uses of future surveys are to be kept in view, and also certain limited surveys and local sanitary drainage-charts should be separately provided for until the larger surveys and charts shall have become available. It is true public economy to promote these works, as in the interest of the public welfare as regards systematic drainage and vitally necessary improvements and protection of water supplies and general sanitary safeguards.

XII. It is earnestly recommended that, as a means of generally diffusing and successfully inculcating the most essential kinds of sanitary knowledge and practice where now most needed and available amongst the people, in every normal school, academy, college and university, and especially in every medical school, the essential principles of public, domestic and personal hygiene should be taught and illustrated, and that by every means which local boards of health, the medical profession and all the educated classes can devise and encourage, the people should be instructed in the knowledge and art of healthy living.

Called into existence by the Legislature of 1880, after twenty or more of the States had founded some form of central sanitary service, and after the Nation had gratefully witnessed upon a vast scale the proof that sanitary protection and vigorous health in time of war are equivalent to the strength of armies, the State Board of Health of New York organized its methods of public service on the basis of a broad reliance upon the share and enlightened concern which the people would have in this work and the objects of health laws. The expectations of the Board in this particular are being abundantly realized, for the people are concerned, and in their primary civil divisions of townships, cities, villages and school districts, they are giving practical effect to whatever this Board has undertaken to do in compliance with the purposes and powers defined in the statutes relating to health.

Though not wanting in certain kinds of authority, the policy of this department of the State's service has mostly been directly the converse of centralization or dictation. From first to last, and from center to circumference, the service has been and will be chiefly a work of studious instruction and guidance in the work required, the coördination of means and methods for practical ends, and bringing to bear the results of investigation of subjects that are at once of general importance to the public health and vitally essential to the sanitary welfare of particular communities which seek and receive the benefits of this service in the name of the State.

To exalt in the common estimation and view of the people, in their communities and families, in their local government and their legislation, and in their general participation in sanitary duties, a controlling regard for the sanctity of human life and the measureless value of health, is the growing purpose of the State as expressed by its Board of Health; and, in this service, while organizing and maintaining the safeguards of health and life, and searching out and smiting their preventable foes, it will be found that the most prolific sources of misery, degeneracy, pauperism and all the disease-engendered burdens which afflict the people and vex Legislatures, are unmasked, and may be vastly diminished by the self-same agencies of sanitary and social improvement which extinguish the sources of fevers, miasms and deadly infections, and which offer the boon of health and bodily vigor in the fullest measure amongst all ranks of the people.

Respectfully submitted,

Edward M. Moore, *President*.
Erastus Brooks,
J. Savage Delavan,
Charles F. Chandler,
Leslie W. Russell,
William M. Smith,
James G. Hunt,
Jas. T. Gardiner,
Elisha Harris, *Secretary*.

Members of the State Board of Health.

Albany, *February* 20, 1883.

APPENDIX.

The official lists of standing committees of the State Board of Health for 1882–83 are as follows :

Executive and Finance Committee.

Hon. Erastus Brooks, *Chairman ;* Prof. C. F. Chandler ; Dr. E. M. Moore, *President ;* Dr. E. Harris, *Secretary.*

Sanitary Committee.

Prof. C. F. Chandler, *Chairman ;* Dr. William M. Smith ; Dr. E. M. Moore, *President ;* Dr. E. Harris, *Secretary.*

Committee on Registration and Vital Statistics.

Dr. J. S. Delavan, *Chairman ;* Dr. J. G. Hunt ; Dr. E. M. Moore, *President ;* Dr. E. Harris, *Secretary.*

Committee on Sanitary Legislation, Rules and Regulations.

Hon. Attorney-General Russell, *Chairman ;* Dr. J. Savage Delavan ; Dr. E. M. Moore, *President ;* Dr. E. Harris, *Secretary.*

Committee on External and Internal Quarantine.

Dr. Wm. M. Smith, *Chairman ;* Hon. Erastus Brooks ; Dr. E. M. Moore, *President ;* Dr. E. Harris, *Secretary.*

Committee on Public Institutions.

Dr. James G. Hunt, *Chairman ;* Dr. J. Savage Delavan ; Dr. E. M. Moore, *President ;* Dr. E. Harris, *Secretary.*

Committee on Drainage, Sewerage and Topography.

Prof. James T. Gardiner, *Chairman ;* Hon. Erastus Brooks ; Dr. J. G. Hunt ; Dr. E. M. Moore, *President ;* Dr. E. Harris, *Secretary.*

Committee on Effluvium Nuisances.

Dr. J. Savage Delavan, Hon. Erastus Brooks, Dr. Elisha Harris.

Agreeably to section 11 of the act creating this Board (chapter 322 of 1880), that in its annual report it "shall set forth the action of said Board and its officers and agents, and the names thereof for the past year," the following statement is presented :

AN ABSTRACT OF THE MINUTES AND TRANSACTIONS OF THE BOARD — YEAR ENDING NOVEMBER, 1882.

SPECIAL MEETING, ALBANY, *December* 13, 1881.

The annual report was read and signatures of the members ordered to be affixed.

The sanitary committee reported progress in the investigation of the various methods and instruments for safety-testing of illuminating oils. It was

Resolved, That an additional appropriation of $150 be made for the completion of this work; and that the report be recommitted to the sanitary committee, with instructions to report it back to the President and Secretary complete, for use in the second annual report. The same committee submitted outlines of the reports from the eight analysts employed under chapter 407 of 1881, on the departments of work assigned them respectively. It was

Resolved, That the preparation of the list of articles to be recommended to be exempted from the operation of chapter 407 of 1881, is hereby referred to the sanitary committee, with instructions to consult the Attorney-General, as the legal adviser of this Board, in reference thereto.

The duties of clergymen, undertakers and all concerned in the management of the burial of persons who die of infectious diseases were considered, and it was

Resolved, That the Secretary is hereby directed to prepare a circular with regard to public funerals, to be sent to clergymen, physicians, undertakers and school officers.

The report of the committee on public institutions was referred back, for completion by the first of January.

The committee on drainage and topography reported progress in the investigation of swamp drainage in the western part of the State.

The prevalence of small-pox and the mode of its spread came under consideration of the Board. It was

Resolved, That this Board views with great apprehension the wide spread of small-pox contagion along the routes of travel from the Atlantic to the Pacific, and in numerous manufacturing towns in several States;

Resolved, That this Board earnestly requests all health authorities and others, who know of the outbreak or presence of small-pox in any place in the State, to immediately report the fact to the Secretary of the State Board of Health, and to the nearest health officer; and the State Board's Secretary is required promptly to notify the local sanitary authorities and others who are responsible in every place where small-pox or varioloid is known or believed to be present, concerning the action which public safety and the laws require to be taken by them, and to offer such information as will enable them to procure the vaccinal protection with full effect and from best sources. The Board directs its Secretary to furnish to the health officer and board of health of every place where there is small-pox, all necessary instruction and aid for the most speedy and effective control and extinction of the contagion, and to supply the proper forms for the records and reports required under the new State laws.

Resolved, That the Attorney-General be consulted with a view to prepare such amendments of existing laws as may be necessary for the efficiency of the local boards of health throughout the State.

FIRST QUARTERLY MEETING, ALBANY, *February* 8, 1882.

The Secretary gave notice that the annual report had been perfected according to the Board's direction and placed in the Governor's hands, and had been transmitted by him to the Legislature.

The chairman of the committee on drainage, sewerage and topography presented a supplementary report on the separate system of sewerage with daily flushing. The Board adopted the following:

WHEREAS, Many cases of disease directly traceable to contamination of water and earth by the soakage from privies and cess-pools have come within the knowledge of this Board; and

WHEREAS, Disease from this cause will continue to increase more and more rapidly unless action is taken to avert the evil; therefore be it

Resolved, by the State Board of Health:

1. That the use of privy-pits and cess-pools is seriously affecting the public health.
2. That all excreta should be removed from the neighborhood of human dwellings instead of being stored up near them in pits, vaults or pools to poison the water, earth and air.
3. That in villages and cities this removal of excreta should be done by the local authorities who shall be responsible for its proper performance, and in isolated localities by the individuals interested.
4. That this removal of excreta may be cheaply and healthfully done either by "dry-removal" or by water carriage.
5. That we recommend the method of "dry-removal," called the "tub or pail system," as the best for villages, hamlets, and isolated dwellings which are without water supply or have not the means to build sewers.
6. That towns having proper water supply should be provided with a system of small sewers adapted to carry only sewage, including excreta, slops, and waste-water, and excluding storm-water, which should be taken care of separately.
7. That the costly plan of large "combined sewers" for carrying sewage and storm-water together has proved a sanitary failure, both in England and in this country; while the "separate system," when properly constructed, avoids in great measure the evils from sewer air, now so common, and is much less expensive for most towns.
8. That the "separate system of sewers" with flush tanks is hereby recommended for general use in this State.

The Secretary called attention to the importance of having the State institutions make returns of their vital statistics directly to the State Board of Health. It was

Resolved, That the State Board of Health hereby directs the Secretary to supply blank forms for the records of mortality and permits for burial to the several State institutions, with the request that they make returns directly to this Board as well as to the proper local board.

Health Officer Gerin, of Auburn, appeared personally and made explanations concerning a nuisance caused by the obstruction of Owasco river through the old State dam, and asked the intervention of the Board to aid in its removal.

On motion, the subject was referred to the committee on drainage, sewerage and topography with power.

The committee on New Jersey stench nuisance upon the Kill von Kull reported the result of their inspection in connection with the State Board of Health, of New Jersey.

Health Officer Dr. Wm. M. Smith called attention to the necessity for an additional rule in reference to examining persons arriving from foreign ports as to their protection against small-pox, authorizing the detention of unprotected persons until such protection is secured by vaccination. The Health Officer was empowered to detain vessels and passengers where disease was found on board the ship; but he wanted authority to take care of such passengers as refused to be examined or vaccinated. The question was: Who would defray their expenses while detained? The National Board of Health would assume the necessary expense of securing vaccination, but no provision was made for subsistence. It would be unjust as well as expensive to detain all for the disobedience of the few who might resist. The consignees would rebel against the imposition of any tax upon them for such subsistence unless there was disease on board. It was

Resolved, If thought to be necessary, that the suggestions of Dr. Smith, Health Officer of the port of New York, for an additional rule for the protection of the people against the introduction of small-pox, be approved by the State Board, and sent to the National Board of Health with a recommendation for its approval and support.

The Secretary presented official communications from the National Board of Health setting forth the readiness of the Board to undertake the necessary expenses that may be incurred in the maintenance of a system of sanitary inspection of immigrants en route in or through the State of New York, with reference to the prevention of the spread of the contagion of small-pox and other diseases. The plan to which this offer of aid relates being that which was proposed by this Board at its meeting in June last, namely, the inspection of immigrants at certain stations of their railway transportation. The Secretary stated that facilities for refuge or hospital care for persons infected with small-pox already exist at East Buffalo, and were in process of preparation by the authorities of the town of Niagara, a mile or two east of Suspension Bridge; that similar facilities were available at Hornellsville, Salamanca and Dunkirk. Health Officer Smith and Commissioner Stephen Smith, of the National Board of Health, were well agreed upon this general plan, and the latter submitted and requested the adoption of the provisions of circular No. 7, of June, 1879. The subject had taken form as directed by a voluntary conference between Commissioner Brooks, the Secretary of the State Board of Health, and Health Officer Smith, with the chairman of the quarantine committee of the National Board of Health, held in New York, January 21. The National Board undertakes to pay all expenses at a given rate approved by it. That the appointments and entire control of the duties are to remain under the State Board's direction.

The National Board requests that the State Board shall adopt in a formal way the rules and regulations of the National Board of Health in reference to such relationships between it and the State Board, and also be prepared to give a certificate, or cause it to be given, showing that the State has no funds available for these expenses as advised to be made. Circular No. 7 was submitted as requested by the National Board. It was

Resolved, That so far as the provisions of circular No. 7, June, 1879, National Board of Health, are applicable in this State in the relations which the State Board of Health and the State of New York now sustain, or may at any time hereafter sustain, to the National Board of Health, they are hereby approved and adopted by this Board.

Resolved, That the subject of appointments and organization of duties which are contemplated for the protection of immigrants and of the State of New York be, and is referred to the President and Secretary of the Board with power to act for the Board.

The Secretary also submitted report of Emil Kuichling, C. E., on the Genesee Valley canal-bed drainage. It was

Resolved, That the Secretary be authorized to request the Commissioner of Public Works to complete the drainage works referred to, so far as such works lie in districts beyond the canal railroad property.

The Secretary called attention to the requests from Auburn and various other places for the Board's advice in reference to school buildings about to be erected, and the propriety of sending Dr. Lincoln to these places to give the counsel desired. The following preamble and resolution were adopted:

WHEREAS, School officers of numerous districts in the State have applied to the State Board of Health for suggestions concerning the proper sanitary arrangements for school-houses, therefore,

Resolved, That the conclusions derived from the report of the standing committee on public institutions, as regards school hygiene, together with the recommendations in Dr. Lincoln's special report on the subject, are hereby adopted by this Board, and ordered to be reprinted from the annual report for distribution to school commissioners and the proper school officers.

The Secretary called attention to the successful plan of vaccination that had been carried out in Rochester, and suggested the value of getting a report from the health commissioners of that city on the subject.

QUARTERLY MEETING, AT ALBANY, *May* 9, 1882.

The standing committee on laws report the progress of the proposed amendment to section 8, chapter 322 of the organic law of the Board, re-defining the powers, and giving greater facility to the action, of the Governor by executive orders; also the progress of the proposed amendment of the General Health Act of 1850 and 1881.

The Attorney-General gave it as his opinion, that under section 7 of chapter 322, or the organic law of the Board, the general supervision over the whole subject of registration, the regulation of the books of record, and the amendment, alterations or corrections to be permitted in them, has been placed under this Board. He would be willing to maintain the affirmative of this proposition should the question come before the courts.

The chairman of the sanitary committee presented a supplementary report on sugars. He recommended that this Board should pursue the plan which has been adopted in England and in Canada for publicly exposing frauds and falsifications in foods and drugs; the chief feature of the plan being the publication of the analysis of the fraudulent articles, the names of the manufacturers and their products. It was

Resolved, That the whole subject be recommitted to the sanitary committee, with instructions that the expenditures be limited to $3,500 for the coming year.

Resolved, That Dr. Samuel A. Lattimore, of Rochester, Dr. Willis G. Tucker, of Albany, and Drs. Frederick Hoffmann and E. G. Love, of New York, be appointed public analysts to serve one year at a compensation of $750, to make such analysis of food and drugs as may be assigned to them by the sanitary committee.

Resolved, That the sanitary committee be authorized to expend a sum not to exceed $500 in securing samples for analysis.

Resolved, That so much of water analysis as is required by this Board during the coming year be referred to the several chemists appointed, who are to be paid at the rate of ten dollars per sample analyzed; the analysis to be made on the recommendation of the local boards of health, the local boards being requested to defray the attendant expenses.

The committee on quarantine made a supplementary report on the work of the New York quarantine, particularly in reference to small-pox and the aid that should be extended to the Health Officer of the port by the National Board of Health in the examination and inspection of emigrants at quarantine. He desired the National Board to pay for a special assistant in the work to be selected by, and under the direction of, the Health Officer. It was

Resolved, That in view of the vast numbers of immigrants entering our country through the port and State of New York, and the labor involved in vaccinating and protecting them and the people of the United States against small-pox, the State Boaad of Health of New York hereby recommends that the Health Officer of the port of New York should be assisted by the National Board of Health in defraying such unusual expenses as are incidental to the examination of emigrant passengers and the vaccination of insufficiently protected persons arriving at said port.

And if, in the opinion of the Health Officer of the port of New York, and of the President and Secretary of this Board it is necessary to establish, temporarily, an inspection of emigrant passengers on emigrant trains en route through the State, at Hornellsville and at Rochester, for further safeguards against contagion, said officers are hereby authorized to request assistance from said National Board of Health, and to have charge of such temporary service.

Resolved, That the committee on drainage, sewerage and topography have authority to engage the services of Emil Kuichling, C. E., at the rate of $170 per month, for such time as in their judgment is necessary for the work of the Board, and under such instructions as may be given to this Board by the Attorney-General, concerning such engagement.*

The Secretary reported that some important drainage work remained to be executed at certain points along the abandoned canals in Chemung, Schuyler and Livingston counties. There was money enough remaining from last year's appropriation for this purpose to complete the work. It was

Resolved, That the Superintendent of Public Works is hereby requested to complete the execution of the drainage works which, in the judgment of this Board, need to be finished on the two abandoned canals where the labor was interrupted last summer.

The subject of having in each town and village in the State a suitable infectious disease refuge and hospital to which infected persons and cases of contagious disease could be sent, was considered, and the Secretary was instructed to have the most suitable plans and specifications for such refuge-hospitals published and distributed in circular form.

SPECIAL MEETING, HELD IN NEW YORK, *June* 22, 1882.

The duties imposed upon the Board by chapter 292 of the Laws of 1882 were discussed, and reported upon. It was decided that a thousand dollars of the five thousand appropriated by the Legislature should be reserved for contingent expenses, the provision of apparatus, etc. The law was considered as just and lenient as regards the standards it fixes. The Board directed its Secretary to prepare and issue an official notification to the public that this law would go into effect on the 9th of August. It was

Resolved, That the sanitary committee be requested after consultation with the public analysts to report as soon as possible to the Secretary the proper tests and instruments to be used in accordance with the provisions of chapter 292, Laws of 1882, entitled "An act to regulate the standard of illuminating oils," etc.

Resolved, That the Secretary be directed to call a meeting of the Board as soon as such report is received.

Professor Chandler suggested that the Secretary be authorized to print three thousand copies of chapter 292, Laws of 1882, for distribution.

The Secretary explained that it was ready to be added to Dr. Elliott's pamphlet, and that the printer had offered to print an edition of the pamphlet containing forty-six pages for $41.45. It was

Resolved, That the Secretary be authorized to print two thousand copies of the pamphlet, with chapter 292, Laws of 1882, added.

The Secretary reported the progress made in the drainage work along the line of the abandoned canals, which had been interfered with by certain land-owners. The town boards of health along twelve sections of the canal had held meetings and secured concessions for the outflow of water between lands which had obstructed the drainage last fall.

The Secretary also reported the progress of sewerage work in the city of Hudson, and the acceptance by the city authorities of the advice given through the engineer sent to counsel with them by the Board.

---

* The Attorney-General decided that the organic law of the Board does not permit such appointment with salary, and that the compensation must be *per diem*, etc.

Mr. Brooks called attention to the increasing nuisance on the Kill von Kull, caused by offensive businesses carried on in New Jersey, and urged that every means within the power of the Board be exhausted to procure an abatement. It was

Resolved, That the committee on effluvium nuisances be authorized to employ a person to trace the nuisances to their sources with a view to laying the facts before the grand jury of Richmond county.

Several complaints in reference to nuisances at Hunter's Point and on Newtown creek were presented and referred to the special committee.

Professor Chandler said the foreman of the grand jury had sent for him to obtain a statement of the present condition of these nuisances. He requested him to say to the State Board of Health, that if the grand jury could do any thing to abate these nuisances, they were ready to do so. It was

Resolved, That the committee on effluvium nuisances be authorized to cause an inspection to be made at once of Newtown creek and the establishments there in order that a report may be presented to the grand jury in response to their request for a statement of the present condition of nuisances there.

On motion, it was

Resolved, That in view of the importance of exactness in the reports and the preservation of correct records of prevalent diseases, all local boards of health, of cities, villages and towns alike, are advised to cause their health officers to prepare and keep for reference outline maps, which shall be known as "sanitary maps," and that the Secretary of this Board be instructed to aid in preparing such maps without expense to the Board.

QUARTERLY MEETING, HELD AT SARATOGA SPRINGS, *August* 9, 1882.

The committee on effluvium nuisances reported, that in obedience to instructions from the Board at a former meeting, the Hunter's Point district had been reinspected and recently reported upon by Mr. Colby. The report shows that whatever nuisance exists there at present is the result of carelessness, and that, as far as offense to New York is concerned, the chief nuisances are abated. But as long as any waste materials of the refineries and manufactories was allowed to discharge into Newtown creek, there would be more or less nuisance.

The chairman of the committee also reported the progress made in dealing with the nuisance opposite to, and from the Bayonne oil refineries; and the committee recommended that the effort to secure its suppression be continued.

Commissioner Brooks stated that a report on the subject, by Dr. Wm. C. Walser, health officer of New Brighton had been prepared for the Board. The report is as follows:

PORT RICHMOND, S. I., *August* 8, 1882.

HON. ERASTUS BROOKS, AND COMMITTEE ON EFFLUVIUM NUISANCES,
State Board of Health:

GENTLEMEN — I have this day made an inspection of the manufactories on Constable Hook, N. J., opposite New Brighton and Port Richmond, in company with Dr. Brush, health officer of Bayonne City, N. J., and Mr. Hollick of the New York health department, and now report as follows:

The following establishments were visited, and as carefully examined as circumstances would permit, viz.: Copper Smelting Works, French Oil Works, Reynold's Varnish and Paint Works, Osgood's Zinc Works, Bergen Point Chemical Works, White's Sulphur Works, Standard Oil Refineries, Kalbfleiche's Chemical Works, and the Ocean Oil Company's Refining Works, and the Petroleum Refinery, owned by Lombard & Ayers.

The only nuisance caused by the three first-mentioned places is from Reynolds' works, where the chimneys are cleansed by burning out occasionally. This does not occur more than three or four times a year.

Osgood's works are constantly emitting sulphurous acid fumes from their ore-roasting furnaces, which could be easily prevented, and the fumes utilized in the manufacture of sulphuric acid.

The escape of fumes from the Bergen Point Chemical Works seems to be due to leaks in the stills, and not to fumes emitted from the chimneys.

The Standard Oil Works were next visited, and here every thing seems to be done that is possible to avoid all escape of noxious substances, yet a great deal of waste seems unavoidable.

No nuisance whatever could be detected from Kalbfleiche's acid factories.

Sludge acid and oil drippings seem to have accumulated around Lombard, Ayers & Company's and the Ocean Oil Works. The latter company has built its tanks and agitators over the marsh-meadows, where the tide readily carries off all waste, and transports it along the adjacent shores. More or less waste and dripping seem inevitable, and the best temporary remedy would be to enforce a thorough system of bulk-heads and dams along the entire water-front, and filling in behind the same, thereby preventing the wash, etc., from coming in contact with the tide-water.

The tanks of Lombard, Ayers & Company were leaking badly and saturating the ground, besides escaping in quantities into the creek adjoining. The chimneys of the furnaces of the same company were emitting quantities of black smoke, which could be obviated by a proper system of smoke-burners and fire-bed blowers, and by prohibiting the burning of the residuary tar from the tanks.

In order to trace the different nuisances to their exact sources it would be necessary to keep a constant watch upon these various works, particularly at low tide, when all refuse that escapes could be easily traced.

All the companies profess entire willingness to comply with whatever is requisite to render their respective works as perfect as possible, in a sanitary point of view; now, each one tries to fasten the responsibility on the other. I also think greater care might be taken in loading of boats with sludge acid, preparatory to transportation, as a very little acid and oil waste will spread over a large expanse of water.

Respectfully submitted,
(Signed) W. C. WALSER, M. D.,
Health Officer, Northfield.

The Secretary reported for the drainage committee, concerning the continued nuisance in New Rochelle, and explained that the means for its abatement had been fully reported upon by the committee and its engineer last fall. That nuisance is caused by the discharge of the sewage of a great brewery into Burling brook for a mile and a quarter through a rocky region, along the eastern border of the village. The Governor's order had remained uncomplied with. The Governor recently directed the Board to make a reëxamination of the nuisance.

The Secretary read a letter from Mr. Robert Jaffreys of the Bank of America, to the Governor, on the subject.

After consideration it was

Resolved, That it is earnestly recommended to the trustees of the estate known as that of David Jones and the New Rochelle brewery, to connect the brewery property with New Rochelle bay by a separate and tubular sewer.

Resolved, That this subject be referred back to the committee on drainage, sewerage and topography, for immediate inspection, and report to the Governor.

The papers officially referred to the Board by the Governor, relating to nuisance upon the Nepperhan river in the city of Yonkers, were submitted; and it was

Resolved, That the papers relating to the nuisance at Yonkers are hereby referred to the committee on drainage, sewerage and topography, for inspection, with instruction to report results to the Governor as soon as practicable.

The petition and papers from the city of Lockport asking the Governor to require the State Board of Health immediately to examine into a public nuisance, said to be caused by the defilement of the Erie canal in the city of Buffalo, by glucose washings and other waste matters, was considered. The feasibility of abating the nuisance by passing the washings from the glucoseries through mechanico-chemical filtering beds before reaching the canal, was discussed. It was

Resolved, That the Board hereby directs its sanitary committee to unite with the committee on drainage, sewerage and topography in an immediate investigation of the sources of the nuisance complained of, and that their recommendations be made to the Governor in the name of the Board as soon as practicable.

The Secretary reported that the Tonawanda nuisance is simply a continuation of this, and that the Hamburgh street canal nuisance of Buffalo is but the beginning of the nuisance at Tonawanda and Lockport.

The papers last received from the Governor relating to the causes of malarial nuisance in Schaghticoke were submitted. The Secretary stated that in a recent visit with sanitary experts from Albany and

Boston, he ascertained that the malarial district had extended a mile or more beyond its limits the previous year, southward and eastward. An effort was now being put forth with a view to securing an abatement of the nuisance in a manner satisfactory to all concerned. It was

Resolved, That the committee on drainage, sewerage and topography shall at once renew its report to the Governor, after reinspection of the district.

A petition from citizens of Utica was submitted, asking for the abatement of a nuisance in the "gulf" between Elizabeth street and the Erie canal in that city. It is caused by the backing up of water from the Erie canal, causing a stagnant basin. The basin is used as a canal feeder, and the city drains into it. Legislation had been sought in vain, last session, for a remedy of the evil. The property belongs to the State. It was

Resolved, That the petition be referred to the committee on drainage, with instructions to present the subject to the Superintendent of Public Works and to the Governor.

The Secretary reported the conclusions of Engineer Kuichling upon drainage of the bed of the late Genesee Valley canal. The objections made by the property owners adjacent to the canal are all withdrawn. The drainage is reported practically completed, and the Department of Public Works reports that there is enough money remaining, after finishing the work on the Chemung canal, to complete the drainage upon all that remains of the State property of the abandoned Genesee Valley canal. He recommended that the Superintendent of Public Works be urged to apply, as far as he can lawfully do so, the means at his disposal for the relief of the nuisance complained of near the terminus of the old canal at Dansville.

Health Officer Dr. Wm. M. Smith reported upon the sanitary protection of emigrants by obligatory vaccination as a condition precedent to their departure from foreign ports, or of landing at the port of New York. He reported that this sanitary service had become so complete as to amount to an almost total suppression of small-pox by emigrants.

The chairman of the sanitary committee, in compliance with the order of the Board at a previous meeting, reported upon the nature of tests and the instruments to be adopted by the Board in giving effect to the law relating to the standards and safety-testing of illuminating oils. The Board adopted the report, and directed that the supervision of this work, under chapter 292 of 1882, be intrusted to the sanitary committee. It was

Resolved, That, as compensation for the duties imposed upon the public analysts by chapter 292 of 1882, the sum of $83.33 per month be allowed to each analyst during the pleasure of the Board.

Resolved, That the State Board of Health hereby recommends and requests all local boards of health in the State of New York, fire marshals, insurance companies and town and village authorities to give notice promptly to this Board of any violation of the law known as chapter 292 of 1882, relating to explosive illuminating oils, within their observation or knowledge.

Resolved, That the report of the sanitary committee for rules and regulations in the administration of chapter 292 of 1882 be printed for public distribution.

Resolved, That at the discretion of the committee on registration the Secretary shall cause such samples of polluted water to be sent to the nearest of the Board's analysts, within a limit not to exceed twenty samples during the coming six months, to be examined as provided for, at $10 per sample.

QUARTERLY MEETING HELD AT ALBANY, *November* 18, 1882.

The Attorney-General reported favorably upon the Board's using in its official work whatever funds the Legislature had appropriated for its use.

The Secretary, for the committee on drainage and topography, reported that about fifty-five miles length of the late abandoned canals in the Genesee and Chemung regions, had been completed as ordered by the Governor and as otherwise provided by order of the Legislature; also that the Board's report upon the Nepperhan nuisance at Yonkers was placed in the hands of the Governor.

The saw-dust nuisances as complained of in the public waters of the State at various places were reported upon, and it was

Resolved, That the reports on the saw-dust nuisance, accompanied by the engineer's notes, with the facts thus far submitted to the Board, be referred to the Attorney-General for advice; and that he be requested to prepare a suitable outline or amendment of law for presentation to the Legislature, with a view to removing the evils complained of.

The report of the inspections and of the chemical investigations relating to nuisances caused by the glucoseries and starch factories in Buffalo, by their waste outflowings into the Hamburgh street and Main canal, was discussed, and the following resolutions were adopted:

Resolved, That in the opinion of the Board, the discharging of refuse laden with organic matter into the Hamburgh street and Main canals, is a source of danger, not only to the citizens of Buffalo, but to the residents along the line of the Erie canal as far as Lockport.

Resolved, That after a careful examination of the works at Buffalo by joint committees of this Board, and the chemical analysis of the various kinds of refuse, it is the opinion of the State Board of Health that the pollution of this water by these factories is entirely unnecessary to the carrying on of their business, and may be completely obviated without in any way interfering with it.

Resolved, That a copy of the above resolutions be sent to each of the factories, and to the various local authorities concerned.

A communication was received from the Association for Improving the Condition of the Poor, in New York, urging attention to the filthy streets of that city, also complaining that Hunter's Point is still offensive to the senses.

The communication embodied a copy of the following minute: "On motion, it was voted that the Secretary make an official communication to the Secretary of the State Board of Health, at Albany, New York, of the present condition of the streets of New York city, and also of the combined nuisances prevailing at Hunter's Point, Long Island, and to proffer the aid of this association in the efforts of the State Board of Health to secure a better condition of our streets and the abatement of evils arising from the foul odors coming from Hunter's Point."

The Attorney-General, as chairman of the law committee, advised, that the local authorities of New York should be held responsible for the streets and their cleaning; but that as regards the Governor's orders, already issued, for the abatement and permanent prevention of nuisances at Hunter's Point the orders would necessarily continue in force until all the nuisances specified in those orders are overcome and prevented. Therefore, it will be expedient for the State Board to keep up any necessary inquisition and notification to secure perpetual compliance with those orders. On motion, it was

Resolved, That Inspector Albert L. Colby be instructed to report, once in each month, to the Secretary the condition of each one of the oil refineries and other factories and places in the neighborhood of Newtown creek which is liable to produce offensive effluvia.

Resolved, That in case it appears from the report of Inspector Colby that any one of the establishments in that neighborhood neglects to properly care for its refuse gases, and other material whereby nuisance is created, the Secretary shall immediately communicate the fact to the offending parties.

The sanitary committee reported that since the last quarterly meeting ten samples of drinking water had been examined by the public analysts at the request of the local board or of health authorities, most of which had been found to be unwholesome.

The sanitary committee also reported that since the last quarterly meeting, the following work had been performed under chapter 292, 1882: Three kerosene accidents had been investigated by Inspector Colby, two of which resulted in loss of life. All were caused by oil which was found to be below the legal standard of the State. Of six samples of oil purchased in Buffalo, four were below standard. Of fifteen samples purchased in Batavia, none were up to the State test, all being dangerous. Of six samples purchased in Syracuse, only one was up to the standard. Of ten samples purchased in Rome, all were bad. Of the 145 samples purchased at 123 stores in Brooklyn, only five were up to the legal standard, twenty-two samples emitted combustible vapors at ordinary temperatures. The committee also reported that Mr. J. N. Partridge, fire commissioner of Brooklyn, had adopted the instrument fixed by the State Board of Health, and would prosecute all offenders in future. The law was now uniform for all parts of the State, except in New York city. The charter of the city directs the fire commissioners to fix the standards which shall be used in testing oils. If the State instrument was adopted by them, the entire State would be secured the same protection from dangerous kerosene that is enjoyed by the citizens of Michigan, Ohio, Indiana, Illinois, Iowa, Missouri and Tennessee, where the same standard has been adopted. The following preamble and resolution were adopted:

WHEREAS, According to the provisions of chapter 292 of 1882, the standard safety-test for kerosene oil throughout the State of New York, with the exception of New York city, has been fixed by the adoption of an instrument by the State Board of Health, which establishes a standard of quality for oil which may be legally sold, similar to that which exists in Ohio, Indiana, Illinois, Michigan, Iowa, Missouri and Tennessee; and

WHEREAS, According to law, it is in the power of the fire commissioners of the city of New York to adopt the instrument approved by the State Board of Health, as has been already done by the fire commissioners of Brooklyn, and thus secure complete uniformity throughout the entire State in the legal standard of kerosene oil, therefore

Resolved, That the fire commissioners of New York city be respectfully requested to take this matter into consideration with a view to the adoption of the State Board's approved tester.

The sanitary committee also reported that since the last quarterly meeting sixty-seven samples of drugs and medicines and one hundred and eighty-eight samples of food had been purchased. Of these, fifty-nine samples of drugs had been examined by the public analysts, and nineteen were found adulterated or impure; fifty-seven samples of food had been examined and twenty were found to be adulterated. The other samples were still in the analysts' hands. The committee also reported that evidence was ready to prosecute offenses against chapter 407 of 1881, in the case of four samples of drugs, one of arrowroot, three of coffee, and seventeen of cream of tartar. On motion, it was

Resolved, That the sanitary committee be authorized to expend a sum not exceeding $500 in prosecuting certain cases of violation of chapter 407 of 1881, and chapter 292 of 1882. The amount to be charged equally to the funds appropriated under each act.

The propriety of amending the law so as to provide for such fines and penalties as would enable the Board to defray the costs of prosecutions where necessary, was discussed. It was

Resolved, That the subject be referred to the Attorney-General with the request that he prepare a suitable amendment of law to cover the subject.

The following preambles and resolution were also adopted:

WHEREAS, The adulteration of milk is extensively practiced in every part of the State; and

WHEREAS, There is no article of food, the adulteration of which is liable to produce such serious consequences; and

WHEREAS, The perishable nature of milk makes it impossible for the State Board through its inspector and public analysts to take charge of this subject, therefore,

Resolved, That the attention of local boards of health be called to this subject in the hope that some system of inspection may be adopted by them to remedy the existing evil.

The chairman of the sanitary committee called attention to the necessity of making a change in the districts assigned to the public analysts so as to secure greater convenience for travel by the lines of railway. The following are districts proposed:*

The western district to include the counties of Oswego, Onondaga, Cayuga, Tompkins, Tioga, and all counties west of these.

The southern district to include Sullivan, Ulster, Dutchess, and all the counties south of these.

The north-eastern or central district to include all the other counties.

---

*At a later date the Board arranged for this service in four districts, viz.; The Metropolitan, North-eastern, Southern Tier and Western.

On motion, the chairman of the sanitary committee was authorized to make such change.

The Secretary called attention to the subject of the third annual report, and the necessity of having it ready within the first ten days of January. On motion, it was

Resolved, That the chairmen of the respective standing committees and of the special committees be requested to have their reports complete for the press and in readiness for presentation at the January meeting of the Board.

On motion, it was

Resolved, That the Secretary be authorized to have an edition of five hundred copies of the report on Water Analysis printed separately.

[A.]

REPORT OF THE EXECUTIVE AND FINANCE COMMITTEE.

Statement of warrants drawn by the Comptroller on account of the State Board of Health of New York, for the year from September 30, 1881, to September 30, 1882:

Printing and Stationery.

1882.	Jan.	21.	E. H. Bender, per account.................	$1 20
	Feb.	4.	R. K. Quayle, per account	27 00
		25.	Van Benthuysen & Sons, per account..........	539 71
	May	4.	Van Benthuysen & Sons, per account	242 75
	July	25.	Van Benthuysen & Sons, per account..........	83 55
		25.	R. K. Quayle, per account	12 00
	Sept.	30.	Comptroller's account to September 30	295 57
				$1,201 78

Postage and Expressage.

1881.	Oct.	11.	Postage stamps	$130 00
	Nov.	22.	Postage stamps	46 00
1882.	Feb.	7.	Postage stamps	80 00
	Mar.	10.	Postage stamps	30 00
	May	10.	Postage stamps	100 00
	June	16.	Postage stamps	30 00
	July	25.	Postage stamps	50 00
	Aug.	22.	Postage stamps	60 00
		22.	Postage stamps	50 00
				$576 00

Scientific and Expert Services.

1881.	Oct.	15.	Prof. Elwyn Waller, water analysis, per account	$164 80
	Nov.	2.	A. L. Colby, special inspection of Kings and Queens counties	61 25
		10.	Dr. D. F. Lincoln, school-house inspection, per account................................	259 26
		15.	A. L. Colby, inspections, per account.........	14 19
	Dec.	2.	E. Kuichling, C. E., inspections and report on Tonawanda and Oak Orchard swamps.......	74 59

1881.	Dec.	2.	Dr. D. F. Lincoln, school-house inspection, per account	$300 73
		6.	A. H. Elliott, investigations in testing petroleum, per account	153 45
		16.	John Kerr, inspections in Kings and Queens counties	95 10
		31.	Dr. D. F. Lincoln, school-house inspections, per account	271 46
		31.	Dr. J. S. Cooley, investigating diphtheria in Warren county	24 65
1882.	Jan.	16.	Dr. L. J. Ames, sanitary inspections of drainage district, Genesee Valley canal	42 00
		16.	L. W. Pratt, clerical service, per account	48 00
	Feb.	10.	Dr. Geo. M. Beard, sanitary inspecting in Chemung and Schuyler counties	129 45
		10.	Dr. E. Waller, water analyses, per account	155 62
		10.	A. H. Elliott, services on petroleum tests, per account	150 00
		10.	A. L. Colby, inspections at Hunter's Point, per account	75 06
	Mar.	8.	A. L. Carroll, M. D., sanitary inspections, per account	38 00
		15.	J. J. R. Croes, C. E., report on New Rochelle nuisance	11 20
	Apr.	4.	E. Kuichling, C. E., report on Perrinton and Auburn nuisance	60 30
	May	5.	E. Kuichling, C.E., report on Fairport nuisances	26 02
	May	15.	Dr. D. F. Lincoln, school inspections, per account	95 93
	June	21.	E. Kuichling, C. E., inspection and services at Batavia and Dansville	40 56
		21.	Dr. P. B. Porter, expenses on duty at Southampton	4 34
		21.	A. L. Colby, inspections of effluvium nuisances	26 79
		21.	E. Kuichling, C. E., inspections at Hudson and elsewhere, per account	117 60
	July	12.	Prof. Richard Prescott, M. E., draughting and estimates for disease refuges	40 00
	Aug.	11.	E. Kuichling, C. E., inspections and reports, per account	60 43
		11.	Dr. F. C. Curtis, sanitary inspections of typhus fever, West Shore Railroad lodging	71 15
	Sept.	16.	E. Kuichling, C. E., inspections at Buffalo, Tonawanda and Lockport	25 17
		19.	Dr. W. C. Walser, sanitary inspection of Kill-von-Kull	17 00
		19.	A. L. Colby, inspections of nuisances, per account	67 17
		19.	Frederick Carman, expenses attending meetings of Board	7 30
				$2,728 57

Salaries and Wages.

1881.	Nov.	1.	Dr. Elisha Harris, Secretary, salary, October	$250 00
		1.	Frederick Carman, stenographer and correspondence clerk	150 00
		1.	Robert Nelson, registry and account clerk	100 00
		1.	Fergus Halpen, office boy and messenger	15 16

1881.	Dec.	2.	Dr. Elisha Harris, Secretary, November	$250 00
		2.	Frederick Carman, stenographer and correspondence clerk	150 00
		2.	Robert Nelson, registry and account clerk	100 00
		2.	Fergus Halpen, office boy and messenger	15 16
		29.	Dr. Elisha Harris, Secretary, December	250 00
		29.	Frederick Carman, stenographer and correspondence clerk	150 00
		29.	Robert Nelson, registry and account clerk	100 00
		29.	Fergus Halpen, office boy and messenger	15 16
1882.	Feb.	1.	Dr. Elisha Harris, Secretary, January	250 00
		1.	Frederick Carman, stenographer and correspondence clerk	150 00
		1.	Robert Nelson, registry and account clerk	100 00
		1.	Fergus Halpen, office boy and messenger	15 16
	Mar.	1.	Dr. Elisha Harris, Secretary, February	250 00
		1.	Frederick Carman, stenographer and correspondence clerk	150 00
		1.	Robert Nelson, registry and account clerk	100 00
		1.	Dr. Geo. F. Brooks, mortality registry clerk	50 00
		1.	L. W. Pratt, clerical services	108 00
		1.	Fergus Halpen, office boy and messenger	15 16
		31.	Dr. Elisha Harris, Secretary	250 00
		31.	Frederick Carman, stenographer and correspondence clerk	150 00
		31.	Robert Nelson, registry and account clerk	100 00
		31.	Dr. Geo. F. Brooks, mortality registry clerk	100 00
		31.	L. W. Pratt, clerical services	108 00
		31.	Fergus Halpen, office boy and messenger	15 16
	Apr.	29.	Dr. Elisha Harris, Secretary, April	250 00
		29.	Frederick Carman, stenographer and correspondence clerk	150 00
		29.	Robert Nelson, registry and account clerk	100 00
		29.	Dr. Geo. F. Boooks, mortality registry clerk	100 00
		29.	L. W. Pratt, clerical services	12 00
		29.	Fergus Halpen, office boy and messenger	15 16
	June	1.	Dr. Elisha Harris, Secretary, May	250 00
		1.	Frederick Carman, stenographer and correspondence clerk	150 00
		1.	Robert Nelson, registry and account clerk	100 00
		1.	Dr. Geo. F. Brooks, mortality registry clerk	100 00
		1.	Fergus Halpen, office boy and messenger	18 00
	July	1.	Dr. Elisha Harris, Secretary	250 00
		1.	Frederick Carman, stenographer and correspondence clerk	150 00
		1.	Robert Nelson, registry and account clerk	125 00
		1.	Dr. Geo. F. Brooks, mortality registry clerk	100 00
		1.	L. W. Pratt, clerical services	50 00
		1.	Fergus Halpen, office boy and messenger	18 00
	Aug.	1.	Dr. Elisha Harris, Secretary, July	250 00
		1.	Frederick Carman, stenographer, and correspondence clerk	150 00
		1.	Robert Nelson, registry and account clerk	125 00
		1.	Dr. George F. Brooks, mortality registry clerk	100 00
		1.	L. W. Pratt, clerical services	48 00
		1.	Fergus Halpen, office boy and messenger	18 00
		31.	Dr. Elisha Harris, Secretary, August	250 00
		31.	Frederick Carman, stenographer and correspondence clerk	150 00

1882. Aug. 31.	Robert Nelson, registry and account clerk	$125 00
31.	Dr. George F. Brooks, mortality registry clerk	100 00
31.	L. W. Pratt, clerical services	100 00
31.	Fergus Halpen, office boy and messenger	18 00
Sept. 30.	Dr. Elisha Harris, Secretary, September	250 00
30.	Frederick Carman, stenographer and correspondence clerk	150 00
30.	Robert Nelson, registry and account clerk	125 00
30.	Dr. George F. Brooks, mortality registry clerk	100 00
30.	Fergus Halpen, office boy and messenger	18 00
		$7,472 12

Traveling and Other Necessary Expenses of Members.

1881. Nov. 11.	Dr. J. Savage Delavan, per account	$23 20
16.	Dr. William M. Smith, per account	13 95
21.	Erastus Brooks, per account	33 90
Dec. 9.	Dr. Elisha Harris, per account	198 69
13.	Dr. J. Savage Delavan, per account	18 13
13.	Dr. James G. Hunt, per account	30 00
13.	Prof. Charles F. Chandler, per account	89 23
29.	Erastus Brooks, per account	96 90
Feb. 1.	Dr. E. M. Moore, per account	30 88
June 24.	Dr. J. Savage Delavan, per account	15 70
July 15.	Dr. William M. Smith, per account	27 90
Aug. 31.	Erastus Brooks, per account	66 95
Sept. 8.	Dr. James G. Hunt, per account	65 17
14.	Dr. William M. Smith, per account	19 30
14.	Dr. E. M. Moore, per account	38 82
14.	Erastus Brooks, per account	42 79
14.	Dr. James G. Hunt, per account	7 50
14.	Dr. J. Savage Delavan, per account	24 20
		$843 21

Library.

1882. Jan. 21.	Bender, for books	$9 50

Miscellaneous Expenses at Central Office.

Sept. 19.	Expenses, per itemized account	$86 92

Furniture.

Jan. 21.	E. Bender, per account	7 00
Mar. 21.	Westcott, chairs for Bureau	9 50
		$16 50
	Grand total	$12,934 60

Statement of Expenses under chapter 407 *of* 1881, *from January* 1, 1882, *to September* 30, 1882.

1882. Jan. 16.	Chas. E. Munsell, inspector, per account	$60 20
16.	T. De Lap Smith, inspector, per account	70 60

1882. Jan.	18.	Westerman & Co., books, per account	$2 95
	18.	E. G. Love, analyst, examination and report on foods, per account	400 00
Feb.	10.	Albert H. Chester, analyst, examination and report on foods, per account	403 93
	25.	C. Van Benthuysen & Sons, printing, per account	108 75
Mar.	7.	I. E. Englehardt, analyst, examination and report on beers, etc., per account	401 00
	7.	Fred. Hoffmann, analyst, examination and report on drugs, per account	400 00
	7.	S. A. Lattimore, analyst, examination and report on foods, per account	403 50
	7.	G. Caldwell, analyst, examination and report on cheese, lard, etc., per account	401 70
	7.	W. W. Pitt, analyst, examination and report on sugars, per account	413 00
	20.	W. G. Tucker, analyst, examination and report on drugs, per account	400 00
	20.	W. G. Tucker, analyst, for expenses, per account	5 73
May	15.	A. L. Colby, inspector, per account	318 43
	22.	The Sanitary Engineer, subscription, per account	6 00
July	25.	S. A. Lattimore, analyst, expenses attending special meetings	21 78
Sept.	29.	Prof. Charles F. Chandler, for various supplies, per account	118 52
	29.	A. L. Colby, inspector, per account	59 33
	30.	E. G. Love, analyst, for services, per account	206 28
			$4,201 69

The above expenditures are classified as follows :

For traveling and incidental expenses of chemists and examiners	$88 84
For compensation of chemists and inspectors	3,796 28
For printing and stationery	170 78
For purchases of samples for analysis	63 89
For library and literature for chemists and Board	9 95
For postage, expressage and telegrams	16 46
For chemical apparatus and supplies	55 49
	$4,201 69

Statement of Expenditures under chapter 292 *of* 1882, *to September* 30, 1882.

Sept.	30.	A. L. Colby, inspector, per account	$72 67
	30.	E. G. Love, analyst, per account	141 66
			$214 33

The above expenditures are classified as follows :

For traveling expenses of inspector	86
For compensation of analyst and inspector	$208 33
For expressage	1 00
For purchase of samples for analysts	4 14
	$214 33

(B.)

REPORT OF THE SANITARY COMMITTEE.

I. Report upon the testing of illuminating oils, under chapter 292 of the Laws of 1882.

II. Report upon the examination of food and drugs, under chapter 407 of the Laws of 1881.

III. Report upon the chemical analysis of drinking water.

I. Illuminating Oils.

On June 6, an act was passed by the Legislature regulating the standard of illuminating oils, which is as follows:

Chap. 292, Laws of 1882.

An act to regulate the standard of illuminating oils and fluids for the better protection of life, health and property.

Section 1. No person, company or corporation shall manufacture or have in this State, or deal in, keep, sell or give away, for illuminating or heating purposes in lamps or stoves within this State, oil or burning fluid, whether the same be composed wholly or in part of naphtha, coal oil, petroleum or products manufactured therefrom, or of other substances or materials, which shall emit an inflammable vapor which will flash at a temperature below one hundred degrees by the Fahrenheit thermometer, according to the instrument and methods approved by the State Board of Health of New York.

§ 2. No oil or burning fluid, whether composed wholly or in part of coal oil and petroleum or their products, or other substance or material, which will ignite at a temperature below three hundred degrees by the Fahrenheit thermometer, shall be burned in any lamp, vessel or other stationary fixtures of any kind, or carried as freight in any passenger or baggage car, or passenger boat moved by steam power in this State, or in any stage or street car drawn by horses. Exceptions as regards the transportation of coal oil, petroleum and its products are hereby made when the same is securely packed in barrels or metallic packages, and permission is hereby granted for its carriage in passenger boats moved by steam power when there are no other public means of transportation. Any violation of this act shall be deemed a misdemeanor and subject the offending party or parties to a penalty not exceeding three hundred dollars, or imprisonment not exceeding six months, at the discretion of the court.

§ 3. It shall be the duty of the State Board of Health of New York to recommend and direct the nature of the test and instruments by which the illuminating oils, as hereby before described, shall be tested in accordance with this act. It shall be the duty of the public analysts who may now be employed by the State Board of Health, or who may be hereafter appointed, to test such samples of suspected illuminating oils or fluids as may be submitted to them under the rules to be adopted by the said Board, for which service the said Board shall provide reasonable compensation at the first quarterly meeting of the State Board of Health held after the passage of this act; it shall adopt such measures as may seem necessary to facilitate the enforcement of this act, and prepare rules and regulations with regard to the proper methods of collecting and examining suspected samples of illuminating oils, and the State Board of Health shall be authorized to expend, in addition to all sums already appropriated for said Board, an amount not exceeding five thousand dollars, for the purpose of carrying out the provisions of this act. And the sum of five thousand dollars is hereby appropriated, out of any moneys in the treasury not otherwise appropriated, for the purposes of this section provided.

§ 4. Naphtha and other light products of petroleum which will not stand the flash tests required by this act may be used for illuminating or heating purposes only: —

In street lamps and open air receptacles apart from any building, factory or inhabited house in which the vapor is burned.

In dwellings, factories or other places of business when vaporized in secure tanks or metallic generators made for that purpose in which the vapor so generated is used for lighting or heating.

For use in the manufacture of illuminating gas in gas manufactories, situated apart from dwellings and other buildings.

§ 5. It shall be the duty of all district attorneys of the counties in this State to represent and prosecute in behalf of the people, within their respective counties, all cases of offenses arising under the provisions of this act.

§ 6. Nothing in this act shall be so construed as to interfere with the provisions of chapter seven hundred and forty-two of the laws of eighteen hundred and seventy-one, as regards the duties of the bureau of combustibles of the city of New York, or any other statutes not conflicting with this act, provided that nothing in this act shall be deemed to interfere with or supersede any regulation for the inspection and control of combustible materials in any city of this State made and established in pursuance of special or local laws or the charter of said city.

§ 7. All acts or parts of acts inconsistent with this act are hereby repealed.

§ 8. This act shall take effect sixty days after its passage.

This subject having been under discussion ever since the Board was organized, and a careful investigation having been made under the supervision of this committee of all the most important oil testers used in this country and in Europe, by Arthur H. Elliott, Ph. B., the results of which were published in the annual report for 1881, the Board was able, soon after the passage of the act, to adopt, in accordance with section three thereof, the instrument and methods to be employed in this State for testing oils.

At the quarterly meeting of the Board, held August 9, it was

Resolved, That for the purpose of carrying out the provisions of chapter 292 of the Laws of 1882, the following rules be and hereby are adopted.

Instruments and Tests.

(1.) The instruments to be used in testing oils which come under the provisions of section 1 of the law shall be constructed as shown in the following diagram and description :*

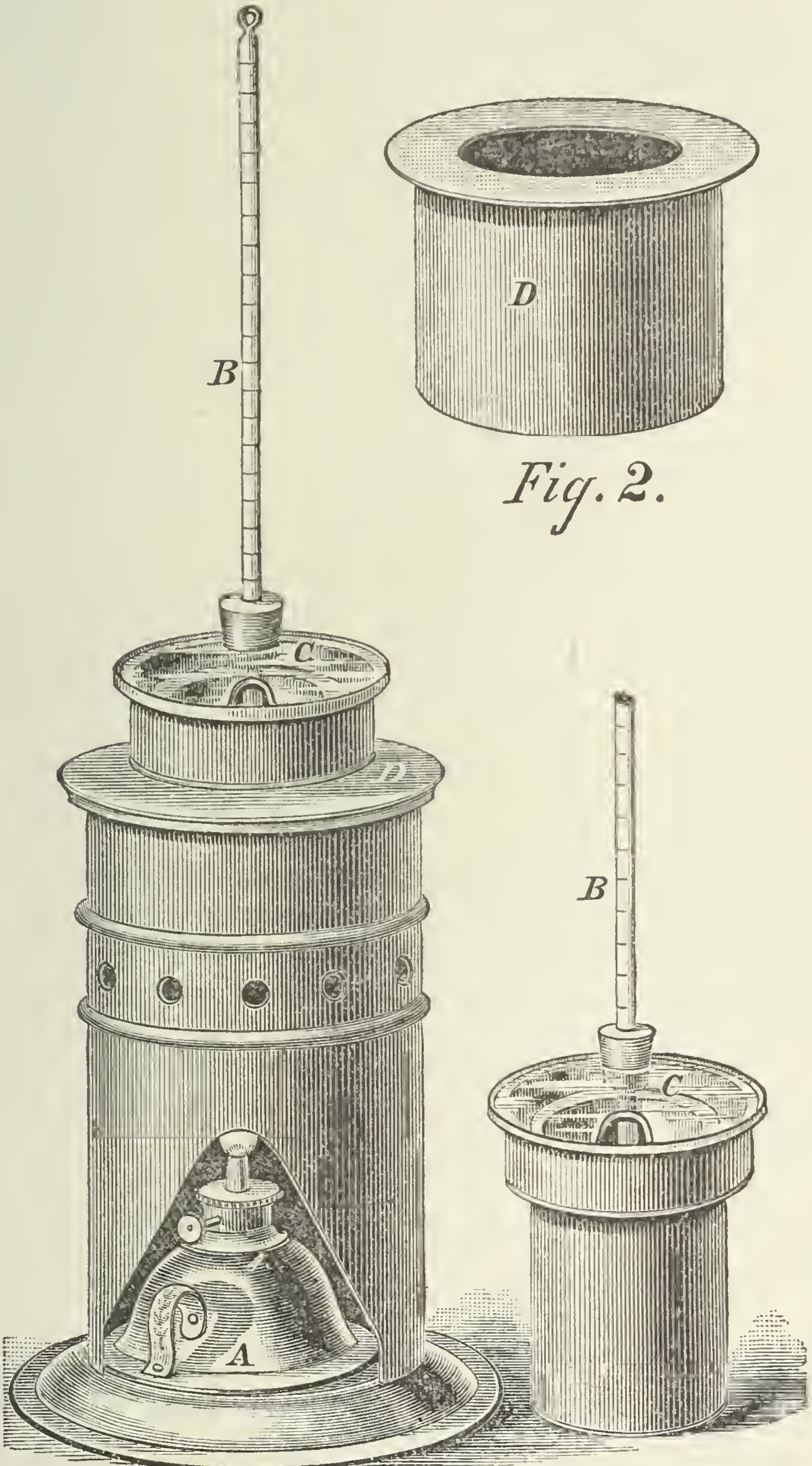


Fig. 2.

Fig. 1.

Fig. 3.

---

*This instrument, in its original form, was devised and first employed by the Michigan State Board of Health; and a description of it will be found in its first annual report, 1873. The Wisconsin Board of Health afterward adopted the same instrument, and it is sometimes mentioned as the "Wisconsin tester." The analysts of this State, acting upon the suggestions of Mr. A. H. Elliott, have made some changes which, in their opinion, will render the testing easier and more certain.

Fig. **1** represents the instrument entire. It consists of a sheet-copper stand 8½ inches high, exclusive of the base, and 4½ inches in diameter. On one side is an aperture 3½ inches high, for introducing a small spirit-lamp, *A*, about 3 inches in height, or better, a small gas-burner in place of the lamp when a supply of gas is at hand. The water-bath, Fig. **2**, is also of copper, and is 4⅛ inches in height and 4 inches inside diameter. The opening in the top is 2⅞ inches in diameter. It is also provided with a ¼-inch flange, which supports the bath in the cylindrical stand. The capacity of the bath is about 20 fluid ounces, this quantity being indicated by a mark on the inside. Fig. **3** represents the copper oil-holder. The lower section is 3⅝ inches high, and 2¾ inches inside diameter. The upper part is 1 inch high and 3⅝ inches diameter, and serves as a vapor-chamber. The upper rim is provided with a small flange, which serves to hold the glass cover in place. The oil-holder contains about 10 fluid ounces, when filled to within ⅛ of an inch of the flange which joins the oil-cup and the vapor-chamber. In order to prevent reflection from the otherwise bright surface of the metal, the oil-cup is blackened on the inside by forming a sulphide of copper, by means of sulphide of ammonium.

The cover, *C*, is of glass, and is 3⅝ inches in diameter; on one side is a circular opening, closed by a cork through which the thermometer, *B*, passes. In front of this is a second opening, ¾ of an inch deep and the same in width on the rim, through which the flashing jet is passed in testing. The substitution of a glass for a metal cover more readily enables the operator to note the exact point at which the flash occurs. A small gas jet, ¼ inch in length, furnishes the best means for igniting the vapor. Where gas cannot be had the flame from a small waxed twine answers very well.

(2.) The test shall be applied according to the following directions:

Remove the oil-cup and fill the water-bath with cold water up to the mark on the inside. Replace the oil-cup and pour in enough oil to fill it to within one-eighth of an inch of the flange joining the cup and the vapor-chamber above. Care must be taken that the oil does not flow over the flange. Remove all air bubbles with a piece of dry paper. Place the glass cover on the oil-cup, and so adjust the thermometer that its bulb shall be just covered by the oil.

If an alcohol lamp is employed for heating the water-bath, the wick should be carefully trimmed and adjusted to a small frame. A small Bunsen burner may be used in place of the lamp. The rate of heating should be about two degrees per minute, and in no case exceed three degrees.

As a flash torch, a small gas jet, ¼ inch in length, should be employed. When gas is not at hand employ a piece of waxed linen twine. The flame in this case, however, should be small.

When the temperature of the oil has reached 85° F., the testings should commence. To this end insert the torch into the opening in the cover, passing it at such an angle as to well clear the cover, and to a distance about half way between the oil and the cover. The motion should be steady and uniform, rapid and without any pause. This should be repeated at every two degrees rise of the thermometer until the temperature has reached 95°, when the lamp should be removed and the testings should be made for each degree of temperature until 100° is reached. After this the lamp may be replaced if necessary and the testings continued for each two degrees.

The appearance of a slight bluish flame shows that the flashing point has been reached.

In every case note the temperature of the oil before introducing the torch. The flame of the torch must not come in contact with the oil.

The water-bath should be filled with cold water for each separate test, and the oil from a previous test carefully wiped from the oil-cup.

(3.) The instrument to be used in testing oils which come under the provisions of section 2 of the law shall consist of the cylinder shown in Fig. **1** and the copper oil-cup shown in Fig. **3**, together with a copper collar for suspending the cup in the cylinder, and an adjustable support for holding the thermometer.

(4.) The test for ascertaining the igniting point shall be conducted as follows: Fill the cup with the oil to be tested to within three-eighths of an inch to the flange joining the cup and the vapor-chamber above. Care must be taken that the oil does not flow over the flange. Place the cup in the cylinder and adjust the thermometer so that its bulb shall be just covered by the oil. Place the lamp or gas-burner under the oil-cup. The rate of heating should not exceed 10° a minute below 250° F., nor exceed 5° a minute above this point. The testing flame described in the directions for ascertaining the flashing point should be used. It should be applied to the surface of the oil at every 5° rise in the thermometer, till the oil ignites.

(5.) The thermometers used for these tests should be compared, from time to time, with a standard thermometer, with a special reference to the accuracy of the 100° and 300° marks.

COLLECTING AND EXAMINING SAMPLES.

(6.) The collection of samples shall be made under the direction of the sanitary committee, by the inspector or the public analysts. The samples, properly marked, shall be placed in the hands of the public analysts for examination, and the results reported to the sanitary committee.

(7.) Whenever an accident shall occur from the explosion or ignition of any oil on the premises of a consumer, it shall be the duty of the inspector to at once secure, if possible, a sample of the oil, and submit the same to one of the public analysts for examination, and to procure such evidence as to the source of the oil and the nature of the accident as may be necessary for legal proceedings.

PROSECUTIONS.

(8.) It shall be the duty of the inspector, with the advice of the sanitary committee, to bring to the attention of the district attorneys all violations of the law which may be discovered, and to furnish the evidence necessary to the prosecution. It shall also be the duty of the public analysts to serve as witnesses when required to do so.

Supervision.

The supervision of this work has been intrusted to the sanitary committee of this Board.

Samples of oil, and inquiries relating to the subject of rules and testing, should be addressed to the chairman of this committee, Prof. C. F. Chandler, Columbia College, Forty-ninth street and Madison avenue, New York.

The foregoing regulations and service having been ordered by this Board, the law is to be faithfully respected and enforced.

These resolutions, together with the law, were printed and freely distributed throughout the State. The public analysts were supplied with the new tester and carefully verified thermometers, and the manufacturers and dealers were instructed in regard to the test.

Nine kerosene accidents have been investigated by Mr. Albert L. Colby, inspector, four resulting in loss of life, and several others in great suffering to the victims, and in considerable loss of property. Four occurred in New York city. two in Brooklyn, one in West New Brighton on Staten Island, one at Batavia, and one in Herkimer. Besides these cases, three others of alleged accident were investigated, which proved to have been due to other causes.

The details of these investigations are presented as an appendix to this report.

Nine other accidents came to the knowledge of the sanitary committee, which it was not possible to investigate, for various reasons.

The flashing point of the oils which gave rise to these accidents varied from 80° to 97° Fahr., a very significant fact, which proves conclusively that the standard 100° Fahr. adopted by this Board is not too high, as some have suggested.

As throwing additional light on the proper standard of temperature to be fixed in determining the safety of these inflammable oils, I take the liberty of presenting the results of investigations made some time since to ascertain the temperature actually reached by oil in lamps under different conditions. Twenty-five lamps of different patterns were selected. They were all filled with the same oil, and were allowed to burn for several hours; from time to time the temperature of the oil in the lamps was carefully determined. These experiments were repeated on different days, to ascertain the effect of the atmospheric temperature. The results are given in the following tables:

THE TEMPERATURE OF OIL IN BURNING LAMPS.

FIRST SERIES.—*Temperature of the Room 73° F. to 74° F.*

No.	Kind of Lamp.	Capacity of Lamp.	TEMPERATURE OF THE OIL.				
			After one hour.	After two hours.	After four hours.	After seven hours.	Average for the seven hours.
		oz.	deg. F.	deg. F.	deg. F.	deg. F.	deg. F.
1	Brass hand-lamp.........	8	85	82	85	86	84.5
2	Brass hand-lamp.........	24	79	83	84	82	82
3	Glass stand-lamp.........	8	77	78	79	80	78.5
4	Glass stand-lamp.........	11	77	81	84	82	81
5	Glass stand-lamp.........	20	78	79	79	80	79
6	Glass stand-lamp.........	7	82	80	85	84	82.75
7	Glass stand-lamp.........	10	84	36	84	82	84
8	Glass hand-lamp.........	9	79	78	85	85	81.75
9	Glass hand-lamp.........	6	81	82	86	86	83.75
10	Glass hand-lamp.........	7	80	78	...	...	79
11	Brass student-lamp.......	13	82	80	83	84	82.25
12	Glass stand-lamp.........	10	81	81	79	78	79.75
13	Brass stand-lamp.........	11	92	89	88	86	88.75
14	Tin lantern..............	7	89	86	88	87	87.5
15	Glass bracket-lamp	19	82	82	84	83	82.75
16	Glass stand-lamp.........	29	82	80	80	84	81.5
17	Brass student-lamp.......	7	80	...	88	...	84
18	Brass stand-lamp.........	14	84	85	87	87	85.75
19	Brass stand-lamp.........	12	100	100	92	91	95.75
20	Metal stand-lamp.........	9	82	82	88	87	84.75
21	Brass stand-lamp.........	12	91	92	88	85	89
22	Bronze stand-lamp.......	16	83	76	79	85	80.75
23	Glass hand-lamp.........	......	79	80	82	82	80.75

With the air of the room at from 73 to 74° F., the temperature of the oil in the burning lamp ranged from 76° to 100° F., the highest temperature of 100° having been reached in a metal lamp at the end of one hour. That this was an exceptionally high temperature is shown by the fact that the highest temperature reached in any other lamp was 92° F. The following is a synopsis of the observations:

	23 Lamps.	11 Metal Lamps.	12 Glass Lamps.
Highest temperature reached...	100°	100°	86°
Lowest temperature reached....	76°	76°	76°
Average temperature..........	83° F.	86°	81°

SECOND SERIES.— *Temperature of the Room 82° F. to 84° F.*

No.	Kind of Lamp.	Capacity of Lamp.	TEMPERATURE OF THE OIL.				
			After one hour.	After two hours.	After three hours.	After four hours	Average for four hours.
	Air of room.............	oz.	deg. F. 82	deg F 83	deg. F. 84	deg.F. 83	deg. F. 83
1	Brass hand-lamp.........	8	92	95	96	95	94.5
2	Brass hand-lamp.........	24	88	94	94	93	92.25
3	Glass stand-lamp.........	8	84	88	86	84	85.5
4	Glass stand-lamp.........	11	84	86	86	84	85
5	Glass stand-lamp.........	20	85	86	87	86	86
6	Glass stand-lamp.........	7	86	87	88	88	87.25
7	Glass stand-lamp.........	10	88	87	89	88	88
8	Glass hand-lamp.	9	87	90	90	90	89.25
9	Glass hand-lamp.........	6	87	91	89	87	88.5
10	Glass hand-lamp.........	7	84	86	86	84	85
11	Brass student-lamp.......	13	86	88	88	88	87.5
12	Glass stand-lamp.........	10	85	86	86	85	85.5
13	Brass stand-lamp.........	11	104	103	101	101	102.25
14	Tin lantern...............	7	95	96	94	96	95.25
15	Glass bracket-lamp... ..	19	84	85	84	84	84.25
16	Brass stand-lamp.........	29	84	85	84	84	84.25
17	Glass student-lamp.......	7	87	88	86	84	86,25
18	Brass student-lamp	14	91	93	92	91	91.75
19	Brass stand-lamp.........	12	101	100	98	96	98.75
20	Metal stand-lamp.........	9	89	92	94	93	92
21	Brass stand-lamp.........	12	88	98	94	96	94
22	Bronze stand-lamp	16	82	88	88	89	86.75
23	Glass hand-lamp..........	6	84	86	85	84	84.75
24	Brass student-lamp.......	10	120	120	120	118	119.5
25	Brass student-lamp.......	12½	112	115	115	116	115

With the air of the room at from 82° to 84° F., the temperature of the oil in the burning lamps ranged from 82° to 120° F. The temperature 120° was exceptional, being confined to one lamp.

Synopsis of Observations.

	In 13 Metal Lamps.	In 13 Glass Lamps.	In 25 Lamps.
Highest temperature reached..	120° F.	91°	120°
Lowest temperature reached..	82°	84°	82°
Average temperature reached..	96½°	86°	91½°

THIRD SERIES.—*Temperature of Room* 90 *deg. F. to* 92 *deg. F.*

No.	Kind of Lamp.	Capacity of Lamp.	TEMPERATURE OF THE OIL.				
			After one hour.	After two hours.	After three hours.	After four hours.	Average for four hours.
		oz.	deg.	deg.	deg.	deg.	deg.
	Air of the room...........	......	92	90	92	90	91
1	Brass hand-lamp..........	8	90	98	100	98	96.5
2	Brass hand-lamp..........	24	89	98	102	100	97.25
3	Glass stand-lamp..........	8	88	90	93	94	91.25
4	Glass stand-lamp..........	11	88	92	94	94	92
5	Glass stand-lamp..........	20	85	92	94	94	91.25
6	Glass stand-lamp.........	7	90	94	96	93	93.25
7	Glass stand-lamp..........	10	90	96	96	96	94.5
8	Glass hand-lamp..........	9	88	95	98	98	94.75
9	Glass hand-lamp..........	6	89	95	96	97	94.25
10	Glass hand-lamp..........	7	88	92	93	94	91.75
11	Brass student-lamp.	13	89	100	102	102	98.25
12	Glass stand-lamp	10	88	92	93	93	91.5
13	Brass stand-lamp..........	11	106	114	116	110	111.5
14	Tin lantern...............	7	99	106	107	105	104.25
15	Glass bracket-lamp........	19	85	92	91	91	89.75
16	Glass stand-lamp..........	29	86	91	92	92	90.25
17	Brass student-lamp........	7	92	99	100	100	97.75
18	Brass student-lamp........	14	94	100	100	100	98.5
19	Brass stand-lamp..........	12	108	112	112	107	109.75
20	Metal stand-lamp..........	9	91	96	100	99	96.5
21	Brass stand-lamp..........	12	104	110	108	106	107
22	Bronze stand-lamp	16	84	90	95	98	91.75
23	Glass hand-lamp..........	6	90	92	94	94	92.5
24	Brass student-lamp........	10	124	129	129	128	127.5
25	Brass student-lamp........	12½	120	126	127	127	125

With the air of the room at from 90 to 92 degs. F., the temperature of the oil in the burning lamps ranged from 84 to 129 degs. F. The highest temperature being exceptional.

Synopsis of the Observations.

	In 25 Lamps.	In 13 Metal Lamps.	In 12 Glass Lamps.
Highest temperature observed..	129 degs.	129 degs.	98 degs.
Lowest temperature observed..	84 "	84 "	85 "
Average temperature observed..	98¾ "	104½ "	92⅓ "

By these results it appears that the temperature of the oil in lamps often rises much above 100 degrees F., thus reaching a temperature at which oil, *which does not emit a combustible vapor below* 100 *degrees F.*, would be dangerous. It is apparent that 100 degrees F. is too low a standard for safety ; 120 degrees F. would not be too high a standard, and its adoption would not add three cents per gallon to the cost of the oil.

Since September 1, when the work was organized, two hundred and thirty-six samples of oil have been procured in different parts of the State, and subjected to examination by the public analysts. Of these, twenty-two samples flashed, or emitted combustible vapor, at the ordinary temperature of the laboratory before heat was applied, that is, between 73° and 75° Fahr. Thirty-three samples only stood the test provided by law. Of these thirty-three, six flashed at scarcely 100°, two at 101°, twelve at 102°, one at 103°, five at 104°, three at 106°, one at 107°, one at 108°, one at 109°, and one at 110°. Two hundred and two samples out of the two hundred and thirty-six purchased failed to stand the State test; one sample was too small in quantity to be tested. The accompanying table exhibits in detail the results of the tests:

FLASHING POINT OF TWO HUNDRED AND THIRTY-SIX SAMPLES OF KEROSENE OIL — TESTED IN 1882.

Oils flashing at temperature		Oils flashing at 89°	16
of Laboratory (73°–75° F),		“ “ 90	5
no heat applied	22	“ “ 91	11
Oils flashing at 70° F....	1	“ “ 92	10
“ “ 71	4	“ “ 93	6
“ “ 72	1	“ “ 94	5
“ “ 73	1	“ “ 95	7
“ “ 74	none	“ “ 96	3
“ “ 75	7	“ “ 97	5
“ “ 76	2	“ “ 98	2
“ “ 77	3	“ “ 99	4
“ “ 78	1	“ “ 100	6
“ “ 79	16	“ “ 101	2
“ “ 80	10	“ “ 102	12
“ “ 81	12	“ “ 103	1
“ “ 82	4	“ “ 104	5
“ “ 83	8	“ “ 105	none
“ “ 84	7	“ “ 106	3
“ “ 85	13	“ “ 107	1
“ “ 86	3	“ “ 108	1
“ “ 87	8	“ “ 109	1
“ “ 88	5	“ “ 110	1
Total tested..			235

Number of oils which stood the test....................	33	
“ “ below the test..........................	202	
Not tested, samples insufficient........................	1	
Total...		236

These samples were purchased in eleven different cities and towns in the State. The accompanying table exhibits the character of the samples purchased in each town:

SAMPLES OF KEROSENE OIL—TESTED, 1882.

CITY.	Samples collect'd.	Shops from which the oil was collected.	No. which stood the test.	No. below standard.
Brooklyn	147	115	5	142
New York	10	9	1	8*
West Brighton, S. I.	2	2	1	1
Albany	26	26	18	8
Herkimer	3	2	0	3
Syracuse	6	6	1	5
Rome	10	10	0	10
Potsdam	8	1	3	5
Rochester	1	1	0	1
Batavia	17	11	0	17
Buffalo	6	6	4	2
Totals	236	189	33	202

The following table shows how the samples were distributed among the analysts:

NUMBER OF OILS TESTED BY EACH ANALYST FROM AUGUST 17 TO DECEMBER 31, 1882.

Analyst.	
Dr. E. G. Love, Southern District	93
Dr. F. Hoffmann, Southern District	78
Dr. W. G. Tucker, North Eastern or Central District	52
Dr. S. A. Lattimore, Western District	26
	249
Deduct for repetition on same sample	13
Total number of samples tested	236

The committee further report that Mr. J. N. Partridge, fire commissioner of Brooklyn, has adopted the instrument of the State Board, and will prosecute offenders in future. The law is now uniform for all parts of the State, excepting New York city, where the charter of the city directs the fire commissioners to fix the instruments which shall be used in testing oils. At the meeting of this Board held in November, when this matter was under discussion, the following resolution was adopted, and subsequently sent by the Secretary to the fire commissioners of New York:

---

*One not tested; sample insufficient.

WHEREAS, According to the provisions of chapter 292 of the Laws of 1882, the standard safe test for kerosene oil throughout the State of New York, with the exception of New York city, has been fixed by the adoption of an instrument by the State Board of Health, which establishes a standard of quality for oil which may be legally sold, similar to that which exists in Ohio, Indiana, Illinois, Michigan, Iowa, Missouri and Tennessee; and

WHEREAS, According to law, it is in the power of the fire commissioners of the city of New York to adopt the instrument approved by the State Board of Health, as has been already done by the fire commissioner of Brooklyn, and thus secure complete uniformity throughout the entire State in the legal standard of kerosene oil; therefore,

Resolved, That the fire commissioners of New York city be respectfully requested to take this matter into consideration with a view to the adoption of the State Board's approved tester.

Up to the present time no response has been received from the fire commissioners of New York. The fire department of Albany has offered to coöperate with the officers of the Board in this matter, and will in future secure samples of oil for examination by the public analysts, whenever accidents occur.

Proper attention has been paid to the accuracy of the results obtained with the tester adopted by this Board, and it has been found that when the instrument is used by persons who are experienced in its use, and with a strict adherence to the directions which were adopted by the Board, and printed in its circular, the tests rarely differ more than 1° Fahr., provided the thermometers used are accurate.

An effort was made to bring to trial the seller of the oil which caused the fatal accident at Batavia; but on bringing the matter before the justice of the peace, and presenting the facts of the case, he decided not to hold the defendant. It is now proposed to take the matter before the grand jury, and endeavor to secure indictment from that body.

II. FOOD AND DRUGS.

The following work has been accomplished under chapter 407 of 1881: One hundred and ninety-four samples of food have been purchased. Of these, one hundred and nineteen have been examined by the public analysts, fifty of which were found to be adulterated, while sixty-nine were pure.

Ninety-two samples of drugs have been purchased, of which seventy-five were analyzed. Thirty-two were found to be adulterated and forty-three pure. The two following tables exhibit the details with regard to these samples:

SAMPLES OF FOOD PURCHASED IN 1882.

ARTICLE.	Pure.	Adulterated.	Total analyzed.	Not reported.	Total purchased.
Allspice	2	3	5	15	20
Arrow root	1	....	1	....	1
Baking powder	1	....	1	5	6
Baking soda	20	1	21	1	22
Butter	1	....	1	4	5
Catsup	1	....	1	....	1
Candy	1	....	1	....	1
Chicory Extract	....	....	....	1	1
Coffee Extract	....	2	2	3	5
Coffee	14	4	18	....	18
Cinnamon	3	4	7	8	15
Cream of tartar	6	22	28	5	33
Cloves	2	4	6	10	16
Flour	3	....	3	....	3
Ginger	2	....	2	3	5
Isinglass	1	....	1	....	1
Kaoka	....	....	....	1	1
Mustard	....	6	6	1	7
Mace	....	....	....	1	1
Pepper	4	4	8	15	23
Saleratus	2	....	2	....	2
Sugar	1	....	1	....	1
Tea	....	....	....	2	2
Vinegar pickles	4	....	4	....	4
Total	69	50	119	75	194

SAMPLES OF DRUGS PURCHASED IN 1882.

ARTICLE.	Pure.	Adulterated.	Total analyzed.	Not reported.	Total purchased.
Arrow root	2	2	4	....	4
Bismuth sub nitrate	1	....	1	....	1
Cocoa butter	2	2	4	....	4
Cream of tartar	7	....	7	....	7
Ipecac root.,	3	4	7	....	7
Jalap	3	1	4	2	6
Magnesia, citrate of	..	1	1	....	1
Mustard	2	4	6	....	6
Orris root	3	2	5	....	5
Opium	1	....	1	....	1
Quinine sulphate	3	1	4	....	4
Rhubarb	5	4	9	2	11
Sarsaparilla root	1	....	1	1	2
Saffron, Spanish	4	3	7	3	10
Sulphur, Precip.	6	7	13	....	13
Tartaric acid	....	....	....	9	9
Wax, white	....	1	1	....	1
Total	43	32	75	17	92

Samples of food and drugs have been purchased in nine different towns and cities of the State, as shown by the following table:

Food and Drugs Purchased in 1882.

Name of City or Town.	Samples Food.	Samples Drugs.	Total Purchased.
New York	87	50	137
Brooklyn	....	23	23
Albany	9	....	9
Utica	16	6	22
Syracuse	28	5	33
Geddes	6	....	6
Batavia	1	....	1
Buffalo	35	5	40
Niagara Falls	12	3	15
	194	92	286

The following table exhibits the amount of work accomplished by each of the public analysts:

Samples of Food and Drugs Referred to the Public Analysts in 1882.

ANALYSTS.	Foods.		Drugs.		Totals.	
	Reported.	Not reported.	Reported.	Not reported.	Reported.	Not reported.
Dr. E. G. Love	59	28	....	9	59	37
Dr. F. Hoffmann	....	....	63	1	63	1
Dr. S. A. Lattimore	10	38	....	8	10	46
Dr. W. G. Tucker	49	10	11	....	60	10
Total	118	76	74	18	192	94
	194		92		286	

The committee further reports that twenty-four cases have been prepared for prosecution, complaints have been made and the sellers of adulterated articles have been arrested and held for trial; seventeen persons for selling adulterated cream of tartar, the percentage of adulteration varying from 37 to 95, consisting in all cases of gypsum; two cases for adulterated coffee; four cases of adulterated mustard.

The following table exhibits the details of these cases:

Prosecutions instituted in New York city in 1882 for Violations of the Law forbidding Adulteration.

Cream of Tartar.

NAME OF RETAIL GROCER.	Address.	Date of purchase.	Samples purchased by.	Defendant brought before Police Court.	Analysts' Report.
Peter H. Peterson	765 Second avenue	July 18	E. G. Love.	December 8	37 per cent gypsum.
Henry Fulle*	823 " "	July 18	"	December 8	92 " " " remainder tartaric acid.*
Simon Steiermann	926 " "	July 18	"	December 11	92 " " " " " "
Martin Lahm	922 " "	July 18	"	December 11	70 " " " also tartaric acid and starch.
Henry Schlichting	141 Mott street	July 18	"	December 30	95 " " " remainder tartaric acid.
John Bade	124 Canal street	August 3	F. Kolbeck.	December 12	90 " " " with tartaric acid and starch.
Ernest Spanhoff	19 Bayard street	August 3	"	December 12	65 " " " " " " " "
John H. W. Doscher	324 Broome street	August 3	"	December 14	85 " " " also tartaric acid.
Adolph Maul	21 Mott street	August 3	"	December 30	90 " " " " " " and a little starch.
Henry See Kamp	982 Second avenue	September 28	A. L. Colby.	December 8	85 " " " also corn starch and tartaric acid.
Simon Steiermann	926 " "	September 28	"	December 11	92 " " " also tartaric acid.
Henry Goldberger	983 " "	September 28	"	December 11	85 " " " also corn starch and tartaric acid.
Martin Lahm	922 " "	September 28	"	December 11	70 " " " " " " " " "
Charles Sinnigen	1002 " "	September 28	"	December 11	40 " " "
Matthew Kelly	851 Tenth avenue	October 5	"	December 8	58 " " " also flour and tartaric acid.
Frederick Diedrich	499 West 57th street	October 5	"	December 8	91 " " " also tartaric acid.
Diedrich F. Deike	881 Tenth avenue	October 5	"	Sick.	92 " " " " " "
		Coffee.			
John O'Conner	838 Tenth avenue	October 5	A. L. Colby.	December 18	About 15 per cent of chiccory.
George Bain	981 Second avenue	September 28	"	December 29	Burnt pease and about 10 per cent of chiccory.
		Mustard.			
Simon Steiermann	926 Second avenue	September 28	A. L. Colby.	December 18	40 per cent wheat flour.
Anna Wedekind	1014 " "	September 28	"	December 29	40 " " " "
Charles Sinnigen	1002 " "	September 28	"	December 18	53 " " " "
Philip Greifenstein	833 Tenth avenue	October 5	"	December 18	71 " " " "
		Precipitated Sulphur.			
George Cutts	508 Third avenue	December 16	A. L. Colby.	December 30	30 per cent sulphate of lime.

*Tried and convicted, Court of Special Sessions, January 8th and 9th, 1883.

One of the defendants, Henry Fulle, was brought to trial before the Court of Special Sessions, on January 8th and 9th. The case was vigorously defended, it is understood, at the expense of the wholesale dealers. The retail dealers have generally stated to the representatives of the Board that it is not their intention to contest the law, that they regard it as for their benefit. The opposition appears to come entirely from the manufacturers and wholesale dealers in adulterated articles. The court convicted the defendant and imposed a nominal fine of ten dollars, this being the first offense. The case is to be appealed at once.

III. MILK.

The perishable character of milk makes it necessary that the enforcement of the law against its adulteration should be undertaken by the local boards of health. With a view to calling attention to the importance of this subject the following resolutions were adopted at the November meeting of the Board:

WHEREAS, The adulteration of milk is extensively practiced in every part of this State; and

WHEREAS, There is no article of food, the adulteration of which is so liable to produce such serious consequences; and

WHEREAS, The perishable nature of milk makes it impossible for the State Board, through its inspector and public analysts, to take charge of this subject, therefore

Resolved, That the attention of the local boards of health be called to this matter in the hope that some system of inspection may be adopted by them to remedy the existing evil.

IV. WATER.

The sanitary committee also reported that during the past year ten samples of drinking water have been examined by the public analysts at the request of local authorities, most of which have been found to be unwholesome.

The following table exhibits this work:

Description of Samples.

No.	Source.	Town or City.	County.	From whom received.	Analyst.
1	Hydrant.	Owego.	Tioga.	Dr. W. L. Ayer.	Dr. Tucker.
2	Reservoir.	Owego.	Tioga.	Dr. W. L. Ayer.	Dr. Tucker.
3	Well.	Knowlesville.	Orleans.	Dr. H. C. Tompkins.	Dr. Lattimore.
4	Well.	Knowlesville.	Orleans.	Dr. H. C. Tompkins.	Dr. Lattimore.
5	Well.	Knowlesville.	Orleans.	Dr. H. C. Tompkins.	Dr. Lattimore.
139	Well.	Geneva.	Ontario.	Dr. M. H. Picot.	Dr. Lattimore.
140	Spring.	Geneva.	Ontario.	Dr. M. H. Picot.	Dr. Lattimore.
	Pump.	Brooklyn.	Kings.	Dr. J. H. Raymond.	Dr. Love.
8001	Well.	Amsterdam.	Montgomery.	Dr. Stover.	Dr. Tucker.
8002	Spring.	Amsterdam.	Montgomery.	Dr. Stover.	Dr. Tucker.

ANALYSIS OF POTABLE WATERS.

Parts in one hundred thousand.

Number.	Appearance in two foot tube. Color.	Odor when heated to 100 deg. F.	Chlorine in chlorides.	Phosphoric acid in phosphates.	Nitrogen in nitrates & nitrites.	Free ammonia.	Albuminoid ammonia.	Oxygen absorbed at 80 deg. F.		Hardness equivalent to carbonate of lime.		Total solids dried at 220 deg. Fahr.	Microscopical examination of deposit.	Conclusion.
								In fifteen minutes.	In four hours.	Before boiling.	After boiling.			
										Deg.	Deg.			
1	Light greenish yellow	Very slight	0.20	Bare trace	0.23	0.0021	0.0210	0.128	0.2450	2.8	2.8	5.71	Vegetable debris and spores infusoria and diatomacea	Condemned.
2	Light brownish tint. Slightly turbid	Slight	0.16	Trace	0.25	0.0032	0.0218	0.139	0.254	2.8	2.8	6.41	Vegetable debris and spores diatomacea and some infusoria	Condemned .
3	Fainty yellow	None	6.55	None	0.1250*	0.0050	0.0060	0.0645	0.0842	39.20	19.14	61.80	Vegetable debris and fibres of wood	
4	Colorless	None	8.40	None	0.2500*	0.0190	0.0620	0.0561	0.0880	40.80	25.42	120.80	Vegetable debris and fragments of insects	
5	Colorless	None	6.20	None	0.0625*	Trace	0.0120	0.0579	0.0870	46.00	23.60	98.36	Vegetable fibres	
139	Colorless	None	0.25	None	0.0125*	0.0020	0.0030	0.0315	0.0575	34.12	15.62	37.80	Vegetable fibres and a few infusoria	Good.
140	Colorless.	None	0.375	None	0.0125*	0.0060	0.0090	0.0168	0.0575	27.52	13.76	40.80	Infusoria cyclops, Diatoms, Vorticellæ, etc.	Good.
	Yellowish. Slightly turbid	Very slight	5.857	Heavy traces	0.3623	0.0060	0.0080	0.0908	0.1589	10.3	7.5	55.64	Mineral matter : vegetable debris	
8001	Light greenish yellow. Clear.	None	8.600	Trace	0.17	0.0018	0.0204	0.0890	0.1750	20.0	15.5	88.0	Vegetable debris, no moving organisms.	Condemned.
8002	Light bluish tinge. Clear.	None	2.30	Trace	0.12	0.0016	0.0036	0.022	0.0410	21.5	11.5	46.0	Vegetable debris infusoria	Better than No. 8001

*Crum's process.

V. DISTRICTING THE STATE.

For the convenience of the public analysts the State has been divided into three districts as follows:*

I. Southern District, embracing Sullivan, Ulster and Dutchess counties, and all of the State south of them. The public analysts for this, the most populous district, are E. G. Love, Ph. D., and F. Hoffmann, Ph. D., both of New York city.

II. North-eastern District, embracing Columbia, Greene, Delaware, Broome, Cortland, Madison, Oneida, Lewis and Jefferson counties, and all that portion of the State north and east of them. The public analyst for this district is Willis G. Tucker, Ph. D., of Albany.

III. Western District, embracing Tioga, Tompkins, Cayuga, Onondaga and Oswego counties, and all that portion of the State west of them. The public analyst for this district is S. A. Lattimore, Ph. D., of Rochester.

VI. CONCLUSION.

In carrying out the provisions of chapter 407 of 1881, and chapter 292 of 1882, the committee finds itself very much embarrassed from want of inspectors. There is only one inspector, Albert L. Colby, Ph. B., of New York, for the entire State. His duty involves the purchase of samples of food and drugs and oil, investigating kerosene accidents, making inspections of oil refineries and other manufacturing establishments at Hunter's Point, and responding to general calls made upon him by the sanitary committee, or by the Secretary of the Board. In addition to this, a considerable amount of time is involved in preparing cases for trial, and in attending court. With the present litigations in progress in New York city, it seems important that at least an additional inspector be appointed for the other portions of the State. It is desirable that the person purchasing the samples be competent to test them, in order that in making complaint he can testify, not only to the fact of the purchase, but also to the fact of the adulteration, and thus avoid the necessity of calling public analysts from a distance to attend a preliminary hearing.

All of which is respectfully submitted.

C. F. CHANDLER,
Chairman Sanitary Committee.

---

* A fourth, to be known as the Southern Tier District, with Prof. G. C. Caldwell, Analyst, of Cornell University, has been provided by the Board.

KEROSENE ACCIDENTS.

Results of Investigations made by Albert L. Colby, Ph. B., Inspector.

Appendix to the Report of the Sanitary Committee.

Case 1.

Date of accident.— Thursday, August 31, 1882, 1:30 a. m.

Date of inspection.— September 2, 1882.

Place of occurrence.— New York city, No. 51 Hester street; first floor front. Premises occupied by A. Kaliska, clothing maker.

Results of accident.— Slight damage to goods.

Description of accident.— The fire was first seen by the watchman in the street. The lamp took fire without apparent cause. No one was in the room at the time. The windows and doors were all closed, hence there could have been no drafts. Two men, sleeping at the time in an adjoining room, and who had gone to bed and left the lamp burning, were first awakened by the watchman trying to break open the hall door leading into the room, when the fire occurred. They rushed in and smothered the fire with clothes. No explosion was heard by any one. The lamp was broken in pieces before any one saw it.

Character of lamp.— Hanging glass lamp, supported midway between ceiling and floor by means of iron-wire frame-work.

Samples of the kerosene collected.— No. 3001. All the oil which remained in the gallon can from which the lamp had been filled. No. 3002. Entire contents of a similar lamp said to have been filled at the same time and from the same gallon filler as the lamp which exploded. No. 3003. Sample of same priced oil as that which caused the fire, purchased where that had been procured.

Report of public analyst.— No. 3001. Too small an amount to test. No. 3002. Flashing point 97 deg. F. No. 3003. Flashing point 91.6 deg. F. 93 deg. 91 deg. 91 deg.

Dated *November* 17, 1882.

Case 2.

Date of accident.— Saturday, September 9, 1882, 8:30 p. m.

Date of inspection.— September 12, 1882.

Place of occurrence.— New York city, No. 315 East Forty-sixth street; apartment house, second story front. Rooms rented by T. J. Loomis.

Results of accident.— Miss Fannie Loomis, aged forty, was severely burned. She died of her injuries on September 11, 1882. Furniture in the apartments destroyed.

Description of accident.— The fire was first seen from the street by a police officer. On reaching the room he found Miss Loomis badly burned. The furniture of the room was also ablaze. A broken lamp lay on the floor.

Character of lamp.— Glass table lamp with metal base.

Samples of kerosene collected.— On inspection I was unable to secure any of the oil from the filler from which the lamp had been filled, for every thing was destroyed. No. 3007. The same quality of oil as that which caused the fire, purchased at the grocery store where the other oil had been bought.

Report of public analyst.— No. 3007. Flashing point 93 deg. F.

Dated *November* 17, 1882.

Case 3.

Date of accident.— Sunday, September 17, 1882, 3 A. M.

Date of inspection.— November 24, 1882.

Place of occurrence.— Brooklyn, No. 50 Hamburg avenue. Apartment house, second story. Premises rented by Mr. Wyschut.

Results of accident.— Henry Wyschut, aged fourteen, severely burnt about the body.

Description of accident.— The lighted lamp standing on the table was upset. The table-cloth took fire and Henry Wyschut in trying to extinguish the flames was severely burnt.

Character of lamp.— A heavy glass table lamp with metal standard and marble base.

Samples of the kerosene collected.— No. 3200. Sample of same priced oil bought at the grocery where the family had always purchased oil.

Report of public analyst.— No. 3200. Flashing point, 96 deg. F.

Dated, *November* 30, 1882.

Case 4.

Date of accident.— Thursday, October 4, 1882, between 1 and 2 A. M.

Date of inspection.— October 10, 1882.

Place of occurrence.— Genesee county, Batavia, south-west corner Bank and North streets. Frame house owned and occupied by Mrs. Lucy Gay.

Results of accident. — Miss Ellen Gay, aged thirty-five, burned to death. Mrs. Gay's house and small barn burned to the ground; nothing saved. The adjoining frame house, owned and occupied by Mr. Charles P. Hurd and family, was also burned to the ground. Furniture mostly saved.

Description of accident.— Mrs. Lucy Gay was going down back stairs with a lighted lamp in her hand. On reaching the foot of the stairs, which came out directly into the sitting-room, she accidentally dropped the lamp. Mrs. Fanny De Voll, a lady renting the front of the house, was awake in her room at the time (a distance of thirty feet from the place of accident). She heard Mrs. Gay come down stairs and heard the lamp fall. She heard no explosion, but it "sounded like pretty heavy glass breaking into atoms," then immediately the whole room was in a blaze. The fire spread rapidly.

Character of lamp.— Ordinary sized glass table lamp with metal upright and marble base.

Samples of the kerosene collected.— Mrs. Gay purchased the oil with which the lamp was filled at the time of the accident, on September 25, 1882, from Henry B. De Lano, retail grocer, No. 47 Jackson street, Batavia, N. Y. She bought one gallon and paid ten cents for it.

Nos. 3123 and 3124 were procured by me on October 10th from Henry B. De Lano, grocer, and came from the same barrel from which Mrs. Gay's oil had been drawn. Mr. De Lano bought this barrel of kerosene oil from Newman J. Nobles, oil jobber, Batavia, who had purchased it on August 24, 1882, from the Phœnix Refining Company, Buffalo, N. Y. This barrel was marked as follows :

48 gals.
NEW YORK STATE TEST,
100 Flash.

L. HADENSTEIN,
authorized
Inspector.
Fire, 130 Test.
August 15,
1882.
Buffalo, N. Y.

TOP.

A
Spread
Eagle
in
Red Paint.

BOTTOM.

NOTE.— The portion of the above label surrounded by dotted line seemed in my opinion to have been made with a separate stencil from the other. Hence, L. Hadenstein only authorizes this to be "*Fire* 130 *Test*," which is not "*New York State Test* 100 *Flash*."— A. L. C.

Report of public analyst.— No. 3123. Flashing point, 80 deg. F. 78 deg. F. No. 3124. Flashing point, 77 deg. F.

Dated *December* 31, 1882.

Case 5.

Date of accident.— Wednesday, November 1, 1882, 8 A. M.

Date of inspection.— November 24, 1882.

Place of occurrence.— Brooklyn, No. 191 Park avenue. House occupied by Mrs. Pechin.

Results of accident.— Miss Maggie Hitchcock, aged twenty, was severely burned. She died of her injuries on November 10, 1882.

Description of accident.— Miss Hitchcock, of Glen Cove, Long Island, at the time visiting with Mrs. Pechin, while dusting the kitchen mantelpiece, noticed that a lamp filled with oil, standing there, seemed to have leaked. The lamp was cracked, and as she lifted it the bottom part stuck to the mantelpiece and the oil spilt down over her dress and on to the range. Her clothes took fire at once and she was burned so severely as to result in her death.

Character of lamp.— A flat-wicked glass bracket lamp. The bracket was provided with two little teeth and a screw for holding the lamp in place ; probably the bottom rim of the glass lamp became cracked from tightening the screw.

Samples of the kerosene collected.— No. 3199. Sample of oil used in the house at date of inspection. This was purchased from the same peddler and at the same price as the oil in use at the time of accident. Cost, twenty cents per gallon.

Report of public analyst.— No. 3199. Flashing point, 96 deg. F.

Dated *December* 31, 1882.

Case 6.

Date of accident.— Wednesday, November 15, 1882, 4:50 P. M.

Date of inspection.— November 23, 1882.

Place of occurrence.— Richmond county, West Brighton, Staten Island. Signal light factory owned by W. F. Coston, Castleton avenue, near Columbia street.

Results of accident.— Mr. Coston's factory, a two-story frame building, was burned to the ground. Contents destroyed. An adjoining shed and barn owned by Morgan & Berry, carriage manufacturers, also burnt. Total loss, $3,000.

Description of accident.— One of the girls in the factory, after lighting a kerosene lamp, endeavored to replace it in the bracket against the wall above the work-table. She dropped it, however, and it fell on the table, setting fire at once to some varnished paper. The flames spread rapidly, as much combustible material was in the factory.

Character of lamp.— Glass bracket lamp.

Samples of kerosene collected.— No. 3197. Sample procured from a large can at Mr. Coston's residence, from which the oil used in the factory was drawn.

Report of public analyst.— No. 3197. Flashing point, 95 deg. F. Dated *December* 31, 1882.

Case 7.

Date of accident.—Saturday, November 18, 1882, 12:30 A. M.

Date of inspection.— November 20, 1882.

Place of occurrence.— New York city, No. 907 Broadway, Room 1 B, occupied as an office by S. H. Morris, M. D.

Results of accident.— Dr. S. H. Morris was severely burned about the head and on the arms and hands.

Description of accident. — Dr. Morris, returning to his office late, lighted a German student lamp, placed it on a wooden-bottomed chair and sat down in another chair near the fire to read. He first noticed a "hissing" sound, and turning, saw the oil in the small receiver underneath the wick (used for catching drippings), was ablaze. The blaze extended up to the wick. The burning oil had dropped down and set fire to the chair. He caught the lamp in one hand and the burning chair in the other and had gone about ten feet in the hall when an explosion occurred and he was covered with burning oil.

Character of lamp.— Nickel-plated "German student lamp."

Samples of the kerosene collected. — No. 3194. A three pint sample of oil taken from a patent gallon can labeled "Pratt's Astral Oil." The lamp had been filled from this can. The can had simply the paper label pasted on it, giving directions for using "Pratt's Astral Oil," signed Charles Pratt & Co., No. 46 Broadway, New York.

Report of public analyst.— No. 3194. Flashing point, 95 deg. F. Dated *December* 31, 1882.

Case 8.

Date of accident.— Sunday, November 19, 1882, evening.

Date of inspection.— November 20, 1882.

Place of occurrence.— New York city, No. 521 East 14th street. Rear house, room 6, second floor, occupied by Francis Hagan and family.

Results of accident.— Ann Brewer, a deaf-mute aged thirty-eight, was very severely burnt. Furniture of the room much damaged.

Description of accident. — Francis Hagan, while drunk, threw two lighted lamps at Ann Brewer. One broke near her, setting fire to her clothes. The furniture in the room was much damaged by the fire.

Character of lamp. – Glass table lamp with metal upright and marble base.

Samples of the kerosene collected. — No. 3195. Sample came from kerosene lamp which was filled at same time from same filler as that which caused the fire. No. 3196. Quart sample of kerosene bought at John H. Hake's, No. 224 Avenue A, grocer, where Francis Hagan had bought his oil. I paid three cents for it. Same price that Hagan paid.

Report of public analyst.— No. 3195. Flashing point, 89 deg. F. No. 3196. Flashing point, 90 deg. F.

Dated *December* 31, 1882.

Case 9.

Date of accident. — Monday, November 27, 1882, 9:30 P. M.

Date of inspection. — December 23, 1882.

Place of occurrence.— Herkimer county, Herkimer, No. 12 Mary street. Residence of Mr. Peter J. Casler.

Results of accident. — Mrs. Casler was so severely burnt that she lived but a day after the accident. Mr. Casler was badly burnt on the arms and hands when attempting to put out the fire.

Description of accident.— Mrs. Casler while going down cellar carrying a lighted lamp tripped on the stairs, and when falling probably threw the lamp against the wall. It broke and the burning oil set fire to her clothing.

Character of lamp.— A small standard lamp — all glass.

Samples of the kerosene collected.— Mr. Peter J. Casler purchased two gallons of oil, a portion of which was in the lamp at time of accident, from Parkes & Barry, retail grocers, Foxe's block, Herkimer, on November 23, paying for it fourteen cents a gallon.

No. 3201. Sample from the two gallon can from which the lamp had been filled previous to accident. The sample was taken from the can on November 30th by James K. Baldwin, and saved for me till date of inspection. Nos. 3203, 3204. Samples procured by me on December 23d at Parkes & Barry's store, from a barrel marked as follows:

A. Ethridge & Co.,
Standard
White
Petroleum.
(A)
Rome, N. Y.

New York State
Legal Test.
51 gals.

This barrel was one of four (similarly marked), sold by A. Ethridge & Co. to Parkes & Barry on November 20, 1882. Mr. Casler's oil, of which No. 3201 is a portion, came from the *first* of these four barrels opened at the store. Nos. 3203 and 3204 were taken by me from the last of these four barrels.

Report of public analyst.— No. 3201. Flashing point, 93 deg. F. No. 3202. Flashing point, 91 deg. F. No. 3203. Flashing point, 93 deg. F.

Dated *December* 31, 1882.

The following casualties, attributed to kerosene oil, proved on investigation to have been falsely reported.

No. 1.

BROOKLYN, *October* 29, 1882.

(From the N. Y. *Tribune*, October 30, 1882.)

"*Flames due to kerosene.*— The explosion of a kerosene lamp caused a fire last evening in the grocery of Joseph Stringer, No. 470 De Kalb avenue, Brooklyn. Stringer's loss on stock and fixtures was $1,000; insured for a similar amount in the London Insurance Company. The building, belonging to the Taylor estate, was damaged to the extent of $500."

Date of inspection.— November 24, 1882.

Corrections. — John String, No. 407 De Kalb avenne.

Origin of fire. — Incendiary.

No. 2.

NEW YORK, *November* 5, 1882.

(From the N. Y. *Tribune*, November 6, 1882.)

"*Burned with kerosene oil.*— Pauline Hayes, aged twenty-one, of Sixty-fifth street and Tenth avenue, was severely burnt about the body last night while lighting a fire with kerosene, and was taken to Roosevelt Hospital."

Date of inspection.— November 6, 1882.

Origin of fire.— Her clothes were set on fire by a burning match when attempting to light the kitchen fire.

No. 3.

BROOKLYN, *December* 3, 1882.

(From the N. Y. *Tribune*, December 4, 1882.)

"*Flames in a dry goods store.*— The explosion of a kerosene lamp caused a fire which did much damage in the dry goods store of Roger Hart, No. 315 Grand street, Brooklyn, early yesterday morning. By hard work the firemen confined the flames to the building in which they broke out. The loss on stock to Mr. Hart was $5,000. It was insured. The damage to the building owned by Philip Strauss, who lived on the upper floor, was estimated at $3,000. It was insured for $6,000. The loss on furniture to Mr. Strauss was $1,500. It was insured for $2,200."

Date of inspection.— December 6, 1882.

Origin of fire.— Not certainly known, supposed to have been incendiary, but at any rate kerosene was not the cause.

[C.]

REPORT OF THE STANDING COMMITTEE ON REGISTRATION AND VITAL STATISTICS.

The system adopted.—The statutes of 1847 and 1880 gave permissive authority to the county boards of supervisors to provide ways and means for obtaining and registering the records of deaths, births and marriages throughout the State. As those laws failed to develop any general desire or correct information for the organization of this branch of public duty by county authority, and as the State Board of Health had come into existence with certain defined authority to advise and direct in the preparation of methods and forms for the required records, as well as for preparing needed amendments of those pre-existing laws, the utmost aid which the county authorities could be induced to give was accepted as the basis for preparing to obtain complete local registration, or at least complete local records, from towns, villages and cities. The amendments of law to attain this object are now embodied in section 3 of the general health law, as made in chapter 351 of the Session Laws of 1882.

By the amended laws the local boards of health are required to supervise and *make complete* the registration of births, deaths and marriages within the limits of their jurisdiction, and, in a special manner, every such board is required to "have the supervision of the registration of deaths, diseases and the causes of death, and, by its appointed officers, to examine all certificates and records of death, and findings of coroners," etc., and to regulate burials, etc., etc., for the protection of the public health. Under the same statute the more perfect organization of the local boards of health was required and the State Board was authorized to order any negligent community to organize its town board of health, and to require of any and every local board of health in the State, whether of town or city, that its registry of vital statistics be complete and perfect. The means to be adopted to secure, and if need be, enforce this required completeness and perfecting, the State Board has to devise; and as the latest amendment of the law (subdivision 5 of section 3, chapter 351 of Laws of 1882) requires this Board, after due notification, etc., "to take such control and adopt such means for causing compliance with the rules and regulations of the records as will secure their completeness and proper registration," efforts are being made to secure such registration throughout the entire State. A safe limitation of the cost (*per record*) has been fixed by the amended law, and the cost, within that limit, namely, "not to exceed fifty cents for each completely verified and registered record of a birth, death or marriage," is "a charge upon the town, village or city." In this manner the ability of the local boards and registry clerks is to be tested, and, to any necessary degree, developed, by the State Board.

Gradual and painstaking as all this work must be, the local government methods have to be accepted and developed as the basis of the State sanitary system, and in that system this duty of registration of vital statistics reposes as an integral part. Had this branch of public service been already in operation when the sanitary system was created, in 1880 and 1882, the latter might not, for the present, have been burdened with this duty, though, before many years, the registry of deaths and births must be placed within the jurisdiction of sanitary government in every State. This Board has recognized its obligation to make the Bureau of Registration and Vital Statistics a model of fitness and completeness as a helpful branch of the public health service; and in doing this it is found to be essentially necessary to enlist the active interest and participation of every community in securing full compliance with all the forms and requirements for perfect records. To accomplish this it has been necessary to expedite and perfect the organization of the local boards of health, while obtaining the best records possible under the Laws of 1880 by town and village clerks, and while the twenty-four cities pursue the methods they prefer until their registry service and their forms and books of record shall be harmonized and made uniform with the State system. At the present time about 5,000,000 out of the estimated 5,500,000 inhabitants of the State are provided with all the means and methods of the system of registration adopted by the State Board in the Bureau of Vital Statistics. Not many months will elapse before every township and city, and all villages that register separately from towns in which they are situated, will possess all the means for keeping these records as the laws require, and in forms adopted for the State system of registration.

Local publication and uses of the registered records.— In most of the cities and in the larger villages the health board or the registry clerk publishes a weekly or a monthly summary of the records as received for registration. The chief object served by these periodical summaries being that of recording a useful statement of the causes and statistics of mortality, these publications will be gradually brought into a uniform method: (1) for cities, with weekly bulletins; and (2) of villages and towns, as well as cities of the smaller class, which will prefer to make only monthly statements. The State Board has prepared the proper form and schedule for monthly statements by all registry officers, and has ordered the monthly publication of a public health statement by its Secretary. Quarterly and annual statements should be expected from every city as well as from this Board. The forms for each of these public statements or bulletins of information are now in readiness, and those for the State Board's use must wait the perfecting of registration in the cities.

The forms of records and registers.— These are at last uniform throughout the State. The local authorities have evinced a kindly appreciation of the importance of the uniformity required, and householders and nearest friends, wherever a certificate is required to be filled out for the individual records, have learned to do their part to perfect these records and prepare the same for completion and attestation by the professional attendants. Copies of the forms used for securing these records for registration are here appended (in shortened lines):

Form 3.

STATE OF NEW YORK.

No. of corresponding Entry in Register Book of Deaths to be inserted here by the Registrar.

County of

Certificate of Death.

............City (Village), or Township.

Should be certified by the head of the family or other responsible friend.

1. Full name of deceased (If an infant not named, give parents' names.)
2. Age..years..months..days. Sex..Color and (Race, if other than the White.)..
3. Single, Married, Widowed (Cross out words not required in this line.). 4. Occupation.....
5. Birthplace (and State or Country.)............(How long in the United States, if of foreign birth.)..........
6. Father's Name and Birthplace............(State or Country.).........
7. Mother's Name and Birthplace............(State or Country.).........
8. Place of Death (If an Institution, state its name.)....(How long resident here.)...(If dying away from home, give home residence below.)

....

9. Date and Hour of Death:— Died on the......day of...... 188 , at about......M.

10. I hereby report this Death, and certify that the foregoing statements are true according to the best of my knowledge.

(Signature and residence of reporter.)..............................

Certified by the Physician and according to sec. 1, chap. 512, Laws of 1880.

11. I hereby certify, That I attended the deceased from...188 , to......188 , that I last saw h......188 , that......died on the......day of......188 , about......o'clock.....M., and that to the best of my knowledge and belief the cause of h......death was as hereunder written:

		Duration of Disease in Years,	Months,	Days,	or Hours.†
Chief and Determining	....	....	....	...	...
	....	....	....	...	...
Consecutive and Contributing.	....	....	....	...	...

† The duration of each Disease, when given, is reckoned from its commencement until death.

Sanitary observations..............................

....

Witness my hand this......day of......188 .

No. of Burial Permit........ (Signature,)...............M. D.
Place of Burial................
Date of Burial............ Residence,...............
Name and Residence } of Undertaker..............................

☞ The Superintendent of Vital Statistics cautions all persons against accepting or using this certificate for any purpose except that of delivering it for a burial permit and registration.

Form 1.

STATE OF NEW YORK.

County of.................. Town of................

Registered No.

BIRTH RETURN.

(in full when possible.)

1. Name of Child..
2. Sex........(Color or Race, if other than the White.)........Date of Birth..........188 .

(If city, give name, street and number; if not, give townsh'p, (village, (and county.)

3. Place of Birth..
4. Name of Father..............................(If out of wedlock and name not given, write O. W.)
5. Maiden and full name of Mother, ...
6. Birthplace (or Country) of Father......Age....Occupation......
7. Birthplace (or Country) of Mother..................Age........
8. Number of this Mother's previous children. ...... How many of them now Living. ....
9. Name and address of Medical Attendant or other authorized person, in own handwriting, Attest. ....

....

10. Date of this Return................

Form 7.

TO THE BUREAU OF VITAL STATISTICS,

Registered Number.

STATE OF NEW YORK.

RETURN OF A MARRIAGE.

In the Town (Village) City of..........County of............

1. Full name of GROOM, ...
2. Place of Residence, ...
3. Age next Birthday,........years,........................
4. ....
5. Occupation, ...
6. Place of Birth, ...
7. Father's name, ...
8. Mother's Maiden name,.....................................
9. No. of Groom's Marriage,..................................
10. Full name of BRIDE,......................................

Maiden name, if a Widow,..................................

11. Place of Residence, ...
12. Age next Birthday,............years.......................
13. ....
14. Place of Birth,...
15. Father's Name, ...
16. Mother's Maiden name,.....................................
17. No. of Bride's Marriage,..................................

N. B.— At Nos. 4 and 13: If of other than the White Race, specify it. At Nos. 9 and 17 state whether 1st, 2d, 3d, etc., marriage of each. The signatures below of Bride and Groom, should be written out in full for the "given" and family names.

Dated at....................................188 .

We, the Groom and Bride named in the above Certificate, hereby certify that the information given is correct, to the best of our knowledge and belief.

..................................(Groom.)
..................................(Bride.)

Signed in presence of..
and..

CERTIFICATE OF MARRIAGE.

This return of marriage should be made to, and registered by, the authorities specified by law within three days after the marriage ceremony. ☞ This certificate is to be sent to the State Bureau of Vital Statistics, on or before the 15th of the month, after its date and local registry.

In the Town (Village) City of........ County of........

STATE OF NEW YORK.

I hereby certify, that......and.....were joined in marriage in our presence, in accordance with the laws of the State of New York, on this......day of........188 , at................

Witnesses to the marriage,
....
....

Attest: ....
Official station...............
Residence.................

This certificate is upon the reverse of the record as given on the opposite page.

The forms used for burial permits, transits, still-births, and for official transcripts from the registers, are entirely uniform throughout the State. The blanks for certified records are officially placed in every school district, and in the hands of all members and officers of boards of health. Local authorities, changeable as they are by the annual elections, find no great difficulty in their part of the registry duties, and families are not indifferent to their share in them. Only the professional attendants upon births and upon marriages demur at the burden the laws impose upon them to make and keep, and under local regulations, to send up for registration, these documents by them certified. Lawful and just as it may be for the State to demand such service from medical attendants and the clergy, it is somewhat burdensome and it falls short of securing all that is required in records and also falls short of numerical completeness. A vast number of children are born without the attendance of a physician; and as to the attestation of marriages in the State of New York, the laws provided no means for securing the registry of any except those which the registry officers may induce the clergy and magistrates to report. Failing to prescribe any duty or define any obligation of the man and woman, or of either of the families concerned with the marriage, as respects making and filing the personal records of the couple, and leaving the duty of making such records wholly to the minister or magistrate who is required to certify or attest the ceremonial, the existing laws concerning marriage registration leave open a way to inaccuracy, incompleteness and neglect of this class of records. This essential defect in the laws is heightened by the fact that no general statute has yet defined by what means or by what persons the certificates of marriage or of birth shall be filed with the registry clerk. Local regulations may be framed and enforced, and the general rules promulgated by the State Board may give a good degree of uniformity to the returns, yet the defects in the statutes lead to a total or optional neglect by professional attendants at marriages and births to make out the required records and file their certificates. These sources of default in the public registration of marriages and births, must be overcome, and in the absence of ecclesiastical and civil surveillance that can never be exercised in free States, it will be necessary to enlist the self-interest and honor of the persons and officials concerned in records and registration of these epochs in the founding of families and their generations. This may be done, ere long, by an acceptable improvement in the laws, aided by the general dissemination of information and the formal facilities for the prompt preparation of such records in every household where the events to be recorded occur, and by the persons who are first in their responsibility and social interest, concerning them. The State Board is using all means now available to secure complete and perfect records, and will be constrained to seek some improvement in the laws.

The records of mortality are now satisfactorily provided for under the general law for the preservation of the public health (chapter 351 of 1882), especially as that statute confers full authority over all burials and requires "that there shall be no burial of any dead person until the certificate of the death and its causes, if known, shall have been made and presented, and until thereupon a permit for burial shall have been given." The formal certificates of death and the local rules and regulations concerning it are uniform in all places throughout the State, and they serve their first purpose in securing a fairly correct record upon which the burial is to be permitted and the health officer is to be informed of the circumstances and causes of mortality, while, in the second place, the public registry of these records of death perpetuate the identity and essential facts of the individual life and the causes that have terminated it. The immediate uses of these records may not only insure rights of kindred and estates and greatly facilitate the adjustment of business obligations and social duties, but they also apply to most important sanitary questions when the death-records are read, week by week, as a kind of barometry of health and disease in the localities, dwellings and classes of persons among which the deaths occur. Even the returns made by coroners are, under the present general statute, subject to the same review and judgment as other records of death; nor are these the least important records which local health officers examine for testimony concerning preventable causes of death. With rare exceptions a medical certificate of the cause of death is required in a return from a coroner.

It is made the duty of every board of health, under the amended law, to examine the returns of coroners, and to require, in connection therewith, a correct medical record of the causes of death.

Progress in local registration of vital statistics.— The State Board of Health having, in 1881, determined (and being by further amendment of law in 1882 required) to make the registration complete through the agency of local boards of health exclusively, resolved to depend no longer upon the means which county boards of supervisors had been empowered to use under the Laws of 1847 and 1880 (chapters 154 of 1847, and 512 of 1880). The work of organizing the local boards of health effectually has been a duty necessarily preceding the collecting, registering and analysis of the records of death, birth and marriage which local registrars in towns, villages and cities are required to forward monthly to the State Bureau of Vital Statistics.

Experience had abundantly shown that in no instance would the *ex-officio* registry clerks in counties, towns, villages and cities, as designated in the laws preceding the act of 1882, make, or even be able to make, complete or satisfactorily correct registration in any one of its three branches. New York, Brooklyn, Yonkers and Rochester were the only cities in the State in which vital statistics were found recorded with even approximate completeness and care as regards death, while the registry in the other branches all alike utterly failed to attain a reasonable completeness. Therefore, the necessity for securing adequate authority and suitable methods for perfecting the registry of vital statistics in its three branches has come to be regarded as the first essential in founding the State system of registration.

Each local board of health, upon organizing, has been required promptly to undertake the duties of local registration; and as efficiency by any one of these depends upon the information imparted, and such other aids toward compliance as were possible, each of the officers required to make out and certify the records of the events to be registered were given by the State Board, and by local boards, such information and such aids in these duties, that at length there is a reasonable certainty of success, both as regards the correctness and completeness of the records, within the jurisdiction of each local board of health, and ultimately in the State Bureau of Vital Statistics.

The State Board of Health, being unwilling that the incomplete and somewhat imperfect records received during the first few months' experience in dealing with local registry offices should be published as the vital statistics of the State, will not publish such returns until all local boards have made fairly complete records for a period of twelve months. This delay is regarded as a duty toward those who would use, or would quote or print these records of life and death either of the whole population, or for any of the civil divisions of the State.

The publication of annual abstracts in each of the three branches of vital statistics, as now provided for, will be possible for the entire State, it is believed, for the year 1884, and for about five-sixths of the civil divisions and population of the State, the records for 1883 may also become available. The practicable uses of these vital statistics require that the areas of each civil jurisdiction, and the total population living in them, shall have their records so completely and separately registered, that it shall not prove a basis of errors, but rather of correct and useful public statement; and that it shall not be chargeable as a fault of the State system, that it supplies incomplete and inaccurate records from cities, villages and towns, whose records of life and death furnish the unworthy basis for erroneous comparisons, deductions and public uses.

This view of public duty of the registering authorities throughout the State has been presented to each local board and its registering officer, and the desired results are now being attained which this board has steadfastly endeavored to secure by all the resources and authority it could bring to bear.

Aids found necessary in organizing and outfitting the local registry service.— 1. It has been found desirable to give to physicians, and all who certify or review certificates of death, a carefully prepared statistical nomenclature, to be used and referred to, for the purpose of securing accuracy and reasonable uniformity in records of mortality. Such publication is about to be given to all who have any responsibility in relation to the duty of certifying or registering the causes of death.

2. To provide for and secure the complete registration of births, it has been found necessary to use all the discretion and authority which this Board can employ, under the laws, to secure properly registered records of all infants that may not have the attestation of professional attendants. As great numbers of mothers, in the hour of maternity, are not attended professionally and must have their newly-born children certified by other means than the statutes have yet provided, this Board's instructions to local boards and registering officers will enforce this duty as far as possible through the local registry offices. In like manner delayed and neglected records are to be collected and publicly registered.

3. Marriage registration, required as an index of the social state of the people in any place, may continue to be a subject of unsettled personal and professional opinion among the ranks of responsible parties, who should regard the law of marriage registry and the subject itself as too sacred to be neglected. The State Board and local boards of health cannot justifiably omit to secure the most complete registration possible in this branch of vital statistics. It undoubtedly will be necessary to make an essential amendment of law, so that there shall be no longer any evasion of the supreme duty of the professional person, who legally declares the validity of the marriage, that is, who solemnizes it, to require that, as a condition precedent to such act, the records of the twain to be married be duly made and witnessed, thus fully to comply with the laws and regulations concerning marriage registration.

This duty being faithfully attended to under any reasonable law, it might never be necessary to have a form *civil* for the marriage ceremonial separately from the form *ecclesiastical*. Though marriage records are not primarily used for disclosing or promoting public health interest, they are fundamentally essential to marriage *as a social state* and to the physical interests and social sanctity of families and homes; and if these circumstances are considered in connection with the biological interests of society and its most essential institution — the family, it may ever be desirable that boards of health in a Commonwealth like ours, be required to supervise and direct the system of marriage registration.

The State has laid the burden upon its boards of health, and until it removes this branch of registration from their care, this view of duty will be everywhere presented and inculcated.

A certain amendment of the statute relating to this class of records will undoubtedly be presented to the Legislature in due time for reasons which will appear in the Board's report upon laws. There may continue to be very faulty incompleteness in marriage registration until certain desired amendments of law shall have been made. All the authority and resources at the command of the State Board are being brought to bear to secure completeness in each branch of the public registry, as the local boards organize and prepare for work. The few points that will require early attention by the Legislature are here given:

Section 7 of chapter 322 of 1880 requires the State Board of Health to recommend such forms and amendments of law as shall be deemed necessary for the thorough organization and efficiency of the registration of vital statistics throughout the State.

Other statutes have required that every marriage, birth and death which may occur in any town, village or city in the State shall be registered within three days of the event so to be recorded, and that the report or certificate for this purpose shall be made by the attending clergyman, magistrate or physician.

The Board, after succeeding in the organization of the means for local registration at the hands of local boards of health, now needs to secure, through timely action of the Legislature, such amendments of the statutes relating to registration and vital statistics as shall result in making these records as complete and perfect as possible.

No existing law in this State definitely requires that the persons who are first and chiefly responsible for records of birth and of marriage, shall make out or furnish them. It has hitherto been required that the physician who attends at a birth, and the clergyman who attests a marriage ceremonial, shall make and keep a record of the same, and shall give a copy of it when required by certain authorities. No provision has hitherto been made for the taking and preservation of records of birth where physicians are not in attendance; yet scarcely half of the births have a medical attendant and have their records publicly registered. No law has specified who shall send or bring the birth records or certificates to the office for registration. No law has yet required persons who are about to be married, or are just united in marriage, to make out a record of their personal identity and family descent, and the date and place of marriage; and no law has suitably provided for and required the preparation of such a record of the persons to be married, as a duty due from them to the person who is to attest the marriage, and no law has made it practicable for the minister or magistrate to require the husband, or the families of the couple, to file the marriage certificate at the office of registration. No provision has been made, hitherto, for having a personal record of the couple about to be married, filed by them at the office of registration, previous to the solemnization of the ceremonial.

Thus it has been true, but no longer should be, that the statutes have failed to provide the way for making out and registering the records of birth, except as physicians may be pleased to send in certificates of such as they have attended, parents not having been required to give attention to their own duty in this matter. Thus the State has failed to secure complete records of births. Thus, also, the persons about to be, or just being married, having been laid under no requirement of law to cause a personal record of themselves to be made and filed, have not, hitherto, given to the ministers and magistrates who solemnize or attest marriage ceremonials, the means for making complete and perfect records such as the laws require them to make and keep, and also to furnish for public registration. The same record which the couple marrying should be required to file at the office for registration of vital statistics is precisely the record which the person who solemnizes or attests a marriage should demand as a dutiful precedent to his official act, and which, indeed, under the law of 1873, may be demanded and exacted from them, if need be.

Numerous cases, important in themselves separately, yet most important as indicating a general necessity for the enactment of a brief law, as now proposed, have been brought before local courts during the past year, yet owing to the defect in the statutes which has hitherto failed to define the way in which the certified records should be brought to the registry office, such appeals to courts have failed to secure the desired results, as no general statute has yet defined whose duty it is to transmit these certificates of records to the local registry office. Yet under special statutes applying separately to the cities of Brooklyn and New York, the requirement is peremptory upon professional persons to make and return the certificate due from them. Any neglect to do so is punishable by heavy fines.

All records of death are amply provided for by a general statute, and there will be no excuse for neglecting any duty concerning them. The same registry officer, who registers the deaths will, as a recording officer in the town, village, or city which he serves, make the registry of all records of birth and marriage received by him; and it is with a purpose to secure completeness and perfection in these records, and to relieve the great embarrassment and vexation which ministers, magistrates and physicians now have in regard to the records, that an amendment of law for this purpose is now proposed. The local boards of health being now well organized throughout the State, they and their registry officers are anxious to have such a law as a means of securing complete and perfect records without litigation and without hardship to physicians and ministers.

RECAPITULATION OF REASONS FOR THE PROPOSED LAW TO BETTER DEFINE AND PROVIDE FOR THE REGISTRATION OF BIRTHS AND MARRIAGES.

1. None of the general statutes of New York, from Colonial times until now, have indicated by whom the facts in the records, to be certified for public registration, shall be furnished.

2. None of the statutes have made it the duty of the family, or other persons that are first in responsibility for the making of a correct record, to cause such records to be made.

3. The Laws of 1830, 1847 and 1880 relating to this subject, more or less directly hold the minister or magistrate, the physician or midwife, responsible for making up the records and attesting them in the cases which they professionally attend; they are simply required to preserve such records and to give a copy of the same whenever demanded. They are under no statutory obligation to file them in any public office.

4. No person or class of persons has been required by any general statute to bring to a public office or officer his attested records of birth or marriage (except in Brooklyn and New York), nor has any statute provided for the reporting of births which occur without professional attendance, or of children by request and attestation of parents or other custodians.

5. Death certificates and all records that pertain to death and burial are amply provided for by the statutes of 1880, 1881 and 1882. (See section 3, chapter 351 of 1882.)

6. Local registry clerks and boards of health, except in the cities of New York and Brooklyn, have no separate or specific provision of statute that will enable them to carry into full effect necessary rules and regulations designed to compel physicians, ministers and magistrates to file at their registry offices the records of births or marriages required for registration, unless, indeed, the courts should, in particular instances, decide that the general power under section 3 of chapter 351 of 1882, "to make the registration complete," would and does carry with it the lawful right to compel such service by ministers, physicians and magistrates who attest such records; yet courts will not generally so decide.

7. The experience of the local boards of health throughout the State, now that they are well organized, has demonstrated during the first eighteen months of their existence, that they do not find it expedient to prosecute at law, or to inflict penalties upon ministers, magistrates and physicians for failure to make returns of marriages and births, which respectively they professionally attend, so defective are the statutes relating to these two classes of records.

8. Investigation and experience have proved to the State Board of Health, and to the local boards generally, that householders and the persons who are naturally first in responsibility for the correct and complete statement of all the facts which are required to be certified and publicly registered, concerning a birth or marriage, can readily be so instructed and aided to do their duty in this matter, and that were a statute so to require, these persons, as here indicated, would cheerfully and faithfully supply the elements of the complete and perfect record which must be attested and publicly registered.

9. The persons who must certify or attest the individual records or certificates should be ever held to their obligation to insure the return and public filing of that which they attest for public registration. In this duty, however, they will elect whatever method will suitably insure the immediate filing of perfected records; and, as regards records of marriage, the primary copy should be already entered at the registry office, while the professional attestation of the ceremonial or solemnization of marriage is to be filed immediately after said event. The husband's and bride's families, and the attestant, must arrange to the complete satisfaction of the last-named person, and he alone can readily be held to the responsibility of not only filing the attestation; but, in case of any loss or wrongful delay of the certificate of his act, he must be required to file a duplicate certificate upon request.

10. Any parent or custodian of an infant that has not had a medical attendant at birth will henceforth be required to observe the duty of registering the record of the child according to the forms of law. However humbly born, every child in the State should have a perfect record so registered.

The duty imposed upon ministers and magistrates who attest or solemnize a marriage, to not only satisfy themselves of the identity of the persons, but of their lawful right to enter upon matrimony, as required under chapter 25 of 1873, and by previous laws, will not be successfully complied with until the parties about to be married make out the record which is to be publicly registered. Such blank forms of record for use by families, physicians, clergymen and magistrates in this State are always ready at every registry office in the cities, villages and towns, and can be had in every school district in the State. No hardship is imposed upon the persons about to be married, however great their haste, or if it is a "Gretna Green" affair. Every man who appreciates the civil and religious obligations of marriage will be deliberate enough to prepare and file the individual records of himself and his bride previous to the ceremonial and attestation.

The mode of interesting every household in the State is now so complete, through the local registry offices and the State Bureau of Vital Statistics, that no inconvenience will be caused, after six months' preparation in the towns and villages, and two months, as proposed, in the cities. The same blank forms as are now in use, would continue to be employed; and no new offices and no additional public expense (unless for the clerical verification of the ante-nuptial record as offered by the man who is to be married) will be required.

[D.]

REPORT OF THE STANDING COMMITTEE ON PUBLIC INSTITUTIONS.

This committee has continued its investigation in three classes of institutions, namely, the public schools, certain seminaries and colleges, and summer resorts.

The committee finds abundant evidence of the sincere concern of the masses of the people for the sanitary welfare of their school children. Indeed the subject has so grown in interest, in the line of inquiries which have now reached all the villages and rural communities of the State, that much good fruit is already borne; and in several of the cities, teachers and school officers have taken up the questions which were under investigation by this Board a year ago, and the popular view and vote of means have expressed themselves in practical and encouraging terms for improvements in the sanitary outfitting of public school-rooms.

While awaiting further study of the facts, which are now being classified in a statistical way, concerning the present necessities of schools and their inmates throughout the State, this committee begs leave here to present a few illustrations of the interest taken in the sanitary and general improvement of school buildings and their outfitting. This is best presented, first, by two examples of structural completeness in school buildings; second, by a few quotations from returns received at the central office of the Board during the past year, the necessary limits of space in the report requiring this brevity on the part of the committee.

The improved school buildings in the city of Auburn. — The first school board which took up the line of inquiry pursued by the State Board was that of Auburn; and as it invited, through its committee on school buildings, whatever counsel this Board would give, the President of the State Board, with Dr. Lincoln, then serving as an expert inspector, entered into the conference.

The annexed plan exhibits some of the essential results of these counsels, the first building being now nearly finished, and the improvements in ventilation, lighting, sittings and the allotments of space generally throughout the building, have been provided in accordance with the decisions that were made upon these essential sanitary objects, for which this Board's advice was sought, as shown in the following letter:

AUBURN, N. Y., *March* 15, 1883.

To the Secretary of the State Board of Health, Albany, N. Y.:

DEAR SIR — You will please find inclosed, diagrams of the Madison avenue school, which has been completed this winter. Green and Wicks of this city, architects.

We are greatly pleased with it in all respects, and especially with the lighting and ventilation. The building is entirely constructed of brick. Not a stick of wood was used in building the partitions, and as it stands on thick walls below, we have not noticed a crack or any settling in the building.

The plastering is finished smooth. There are four large schoolrooms, each accommodating fifty scholars, and being twenty-four by thirty-five feet inside, and twelve feet high, thus giving two hundred and one cubic feet of air space per seat. There are seven large windows on the long side, and two in the rear of each room three feet from the floor and within six inches of the ceiling, giving a large span of light to the floor area, and lighting the room thoroughly even on dark days.

The ceilings are of painted wood and floor of narrow maple, laid on a lining floor with deadening felt between, to prevent noise and air passing.

The second floor has a double set of joists, one carrying the ceiling, and the other and heavier carrying the floor.

The building stands high, giving good ventilation and light to the basement; the roof is of slate and laid in felting. The building has two stair-cases to separate sexes; two cloak-rooms for each room, all doors opening out, front door and vestibule door double-swing. Staircases commence to ascend directly opposite front door, four and one-half feet wide, half way up being a large platform extending entirely across the hall, thence to second story; second story arranged exactly like the first.

The heating is done by steam with both direct and indirect radiation, the greater amount of the heat coming into the room through a warmed air shaft from indirect radiator in basement 1′ 6″ by 2′ 0″ and let into the rooms about six feet from the floor, these openings being covered by fine wire screen without the usual frame.

Each room has its own radiator in the basement, which is supplied independently from out of doors through a fresh-air chamber in the basement. There are also coils of pipe arranged under the windows of each room to turn on heat in case of need in very severe weather. The vitiated air is taken from the rooms at the floor-level by a flue 2 x 2 feet and each one conducted separately to top of chimney. These four foul-air shafts are grouped about the cast-iron smoke flue from furnace, twelve inches in diameter, which heats same and increases the draft of these flues. By hanging a thermometer on each of these air ducts, on March 11, 1883, with a strong west wind, the air was entering at an average temperature of 112 degrees and passing out at sixty degrees, while the temperature of room at teacher's desk was seventy-two degrees. This was not taken during school hours. The air was passing out with great rapidity, not having an anemometer velocity, could not be determined, but it was sufficient to hold any article, like the cover of a book, against the wires. The cost of this school complete, exclusive of steam, was $10,300.

This spring the board determined to build another, following as nearly as possible the model of the Madison avenue school, for Evans street, but to reduce the cost to $8,000. To accomplish this purpose all architectural effect was abandoned, and our aim has been to get a brick building, with the same thorough lighting, heating and ventilation as was found in the Madison avenue school. The architect went to work, using nearly the same plan, reducing the number of windows, but making them proportionally larger. Small glass was used, as being more economical than large, the extra floor joist to carry first story ceiling was abandoned, and several minor changes on the exterior stone and brick work. The room in each floor was reduced to eleven feet, and every thing was done to economize, but keeping in mind the real essentials; the result is inclosed.

The rooms are arranged almost exactly like the previous example, and the ventilation and lighting is to be carried on in precisely the same manner, except as to the warming, where we may make some few changes. The indirect radiators will each be supplied directly from the exterior, and have an automatic valve to close and open as the wind may vary. There will be a much larger boiler to enable us to carry a lower pressure of steam and do the work more easily.

This school has been contracted for $8,000, exclusive of steam heating, which will cost $800.

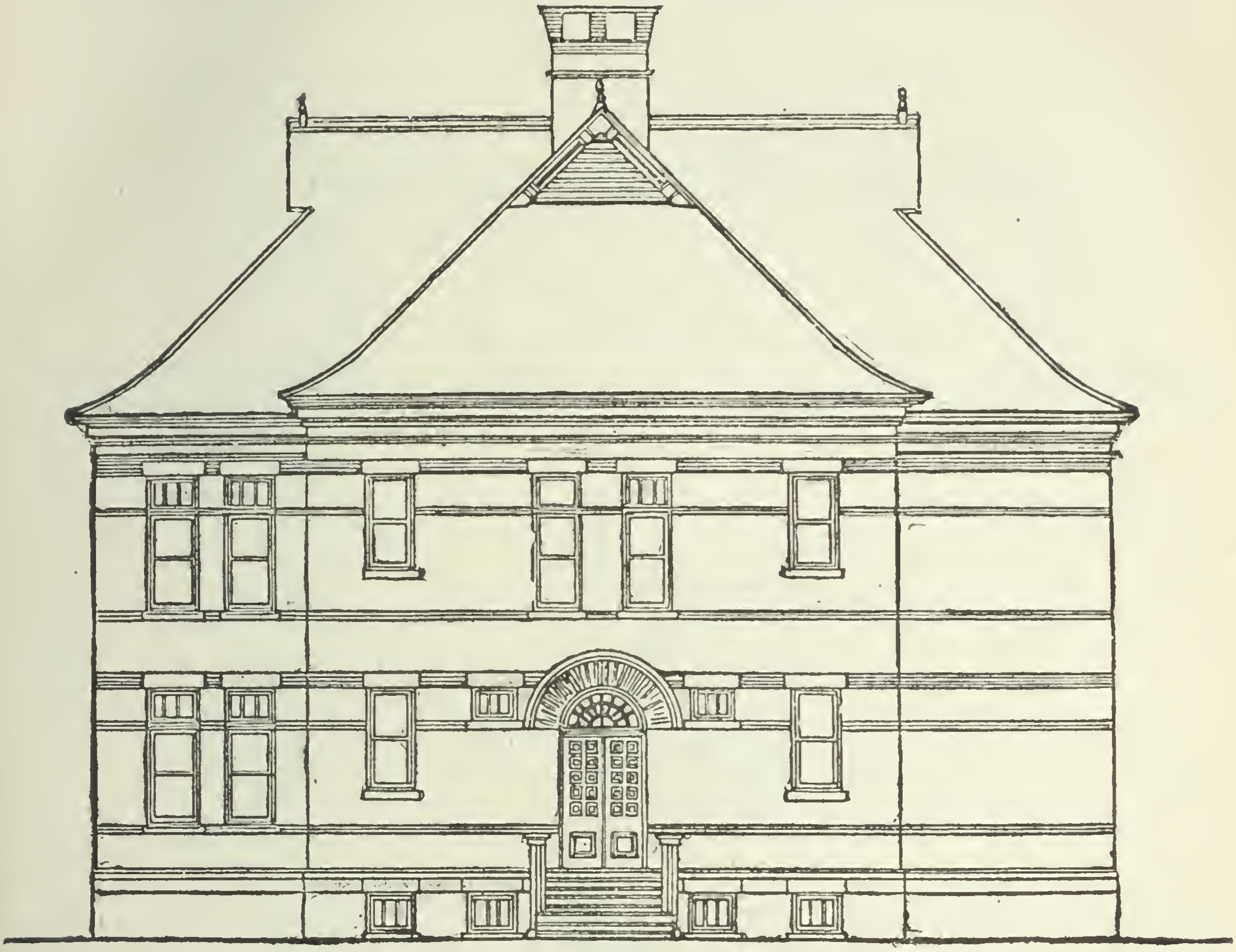
The schools are so arranged, that furnaces may be used, but we are greatly ic favor of steam by the indirect method. Where so many are in one room we find the air is much better.

By the exenditure of a very few dollars, very handsome exterior effects can be arranged for these buildings and greatly improve their appearance, for instance by adding a bell tower, etc.

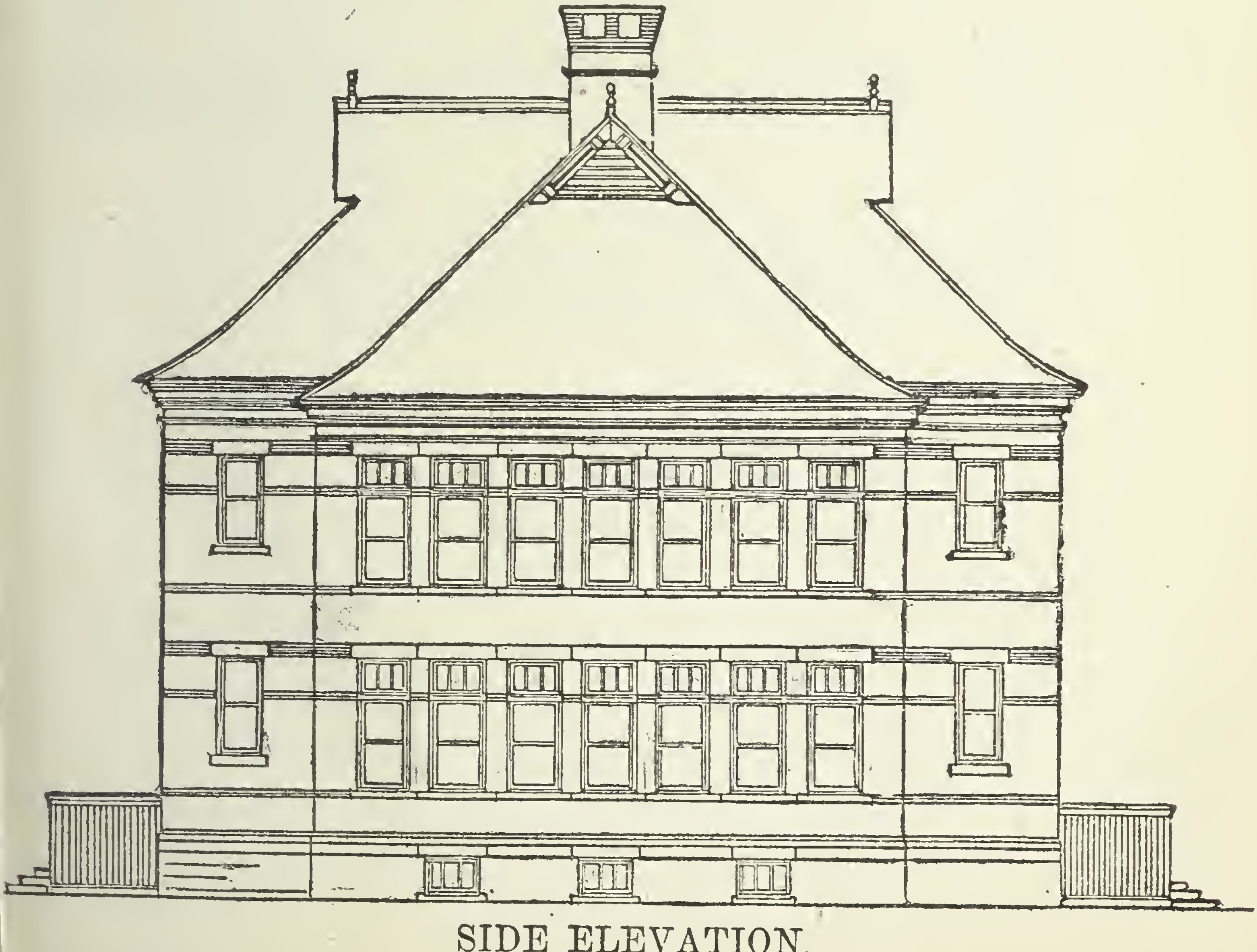
The cloak-rooms in each case have windows high up, to allow of hanging space all around, wainscoted five feet high, double rows of hooks. The doors to cloak-rooms cut up two inches from floor and have transom to open overhead, thus securing good ventilation.

In the Madison Avenue school the cloak-rooms are not heated, they will be in the Evans street, to dry clothes. There is a large radiator in the lower hall of each.

Auburn Public School Building, Madison avenue.

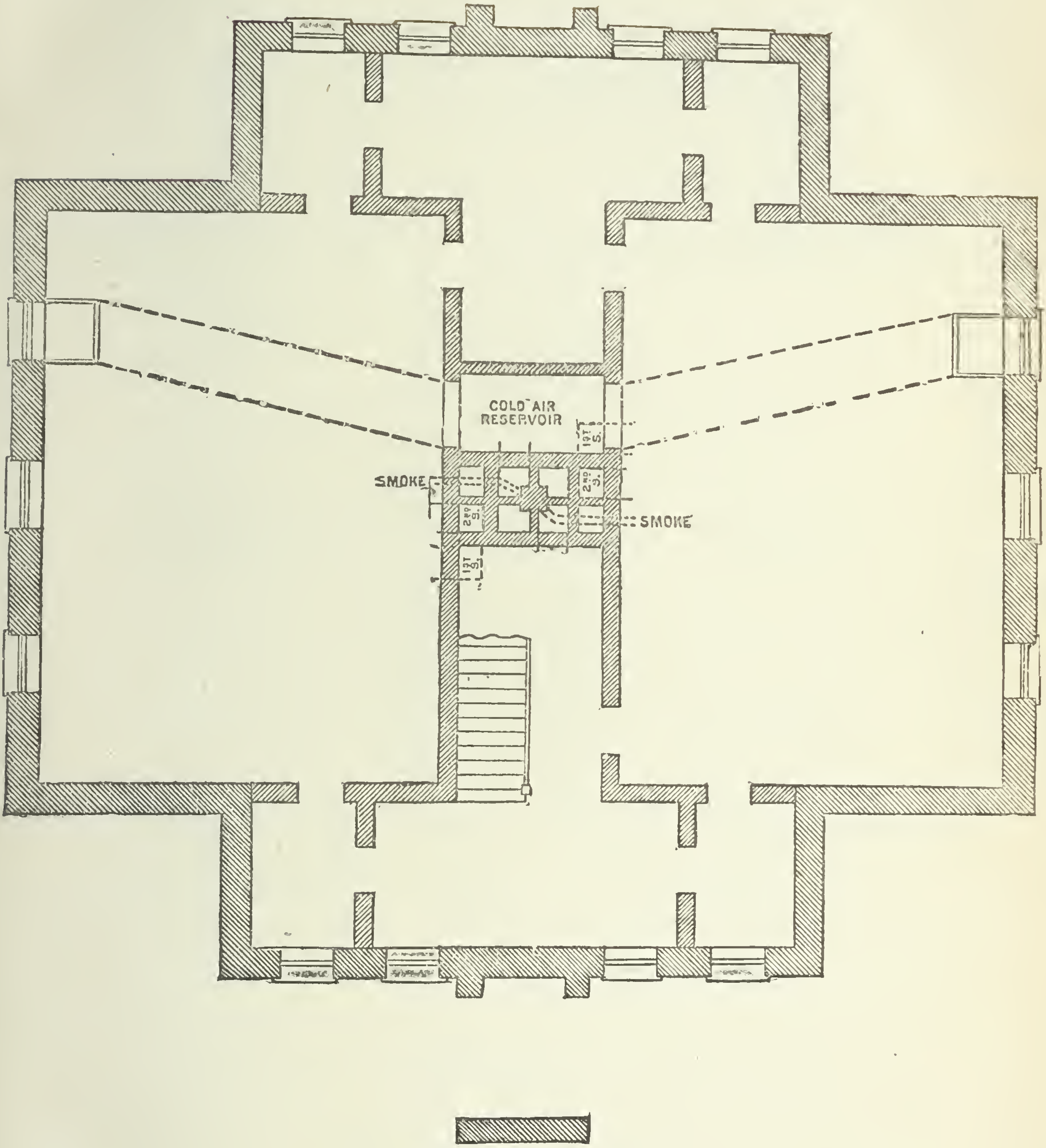


FRONT ELEVATION.

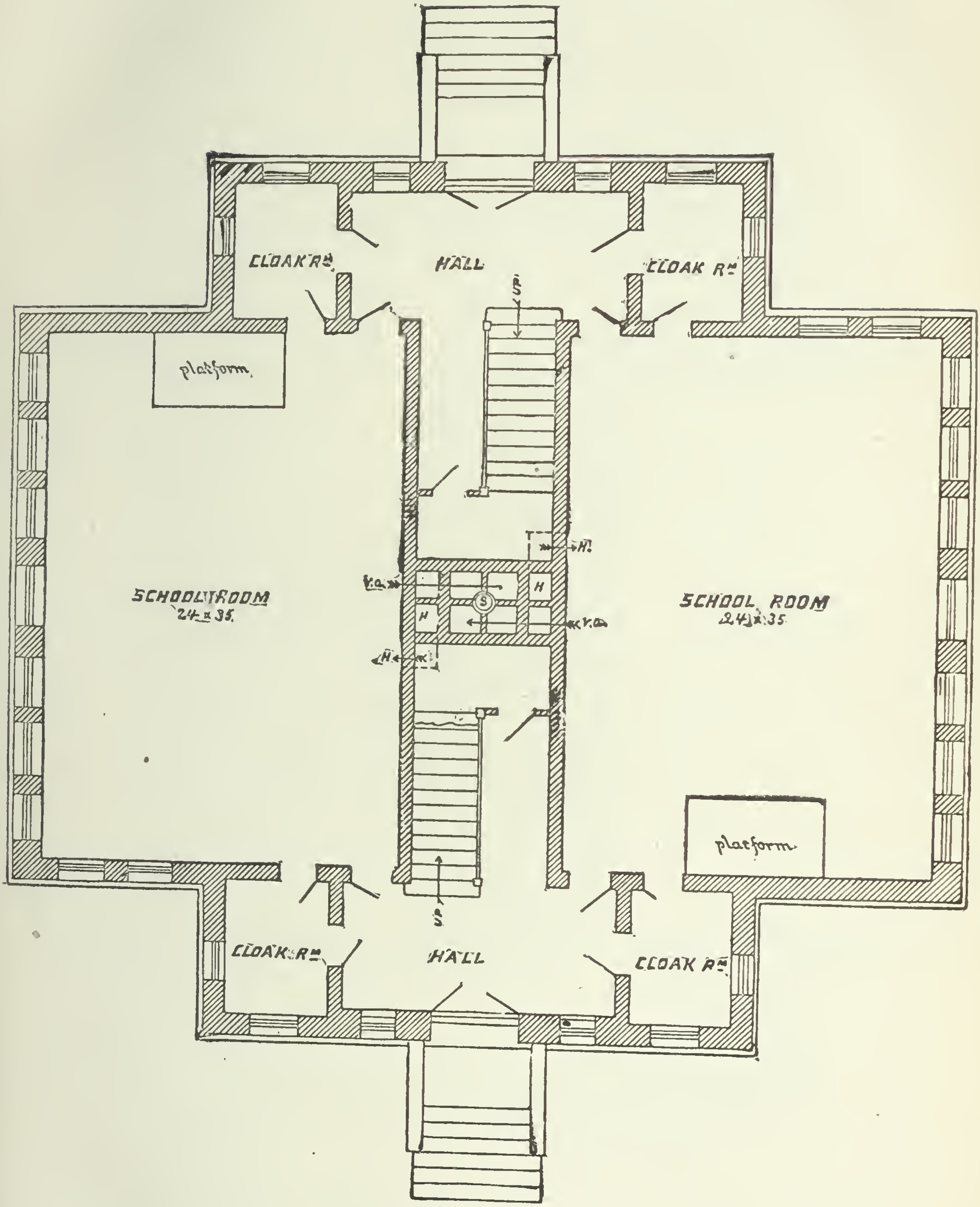


SIDE ELEVATION.

For 3d Report State Board of Health of New York.



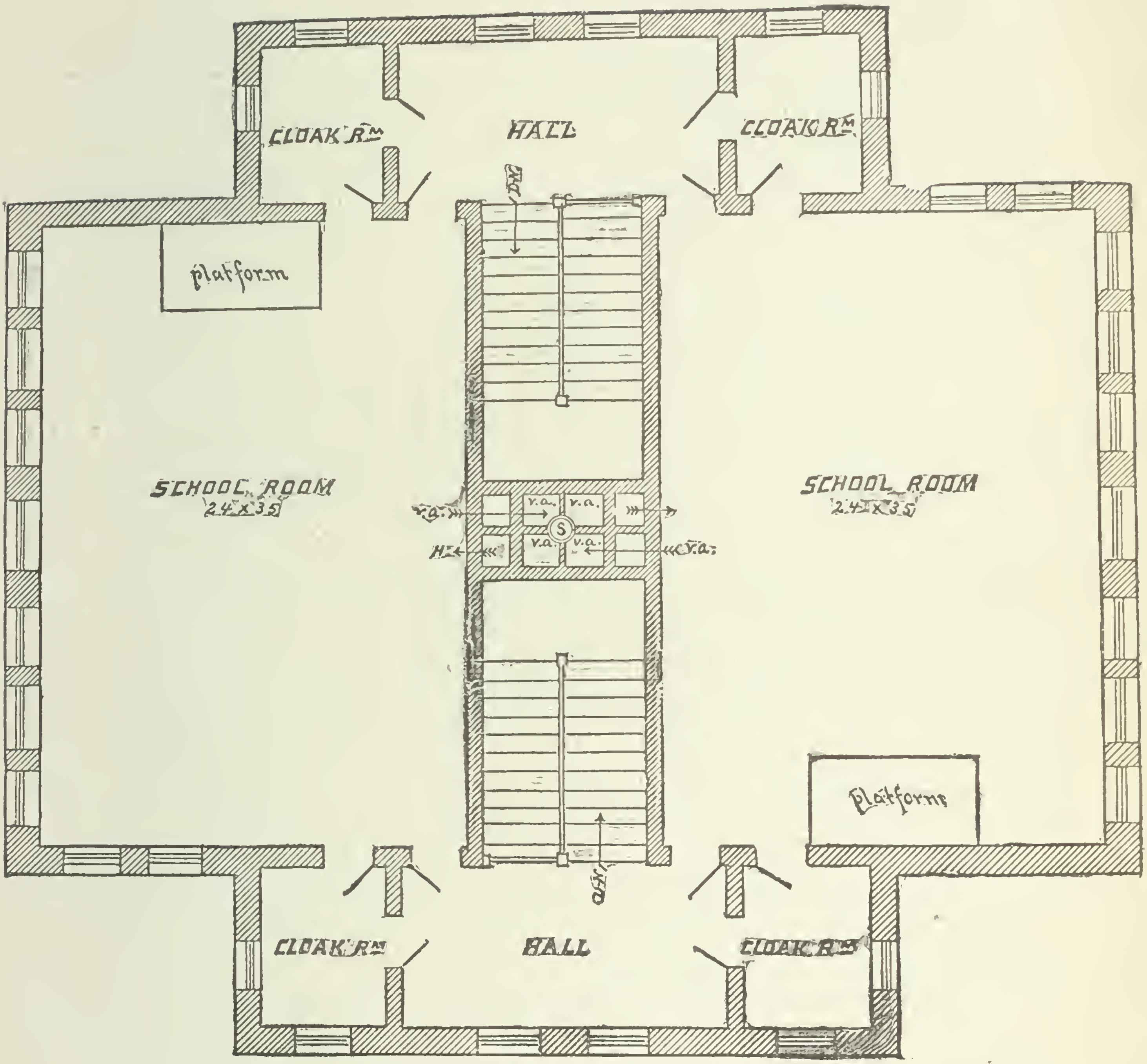
BASEMENT PLAN.



FIRST FLOOR PLAN.

Green & Wilks, Architects,
Auburn, N. Y.

PUBLIC SCHOOL,
Madison Avenue, Auburn.



SECOND FLOOR PLAN.

PUBLIC SCHOOL,
Madison Avenue.

The schools should be provided with double windows to prevent the waste of heat. All the rooms and halls are wainscoted to the bottom of the windows. There are also many little points and conveniences skillfully arranged by the architect which need not be described here.

Very respectfully,
CHAS. L. SHELDON,
Chairman Building Committee.

School buildings of Elmira.— The school buildings of Elmira consist of five structures upon the same general plan.

[Outlines of these plans have been submitted to the State Board of Health, but are too elaborate for reproduction in these pages. They illustrate the practical value of simplicity in school-house structures and the importance of making a more studied provision for lighting of some of the school-rooms.]

Superintendent Tompkins concludes his report with the following remarks.

"A general answer in regard to our treatment of contagious diseases, questions 63 to 68, is as follows:

"In accordance with the State law for vaccination, a sanitary superintendent has been employed by the Board for several years whose duty it is to examine the pupils in the schools frequently with reference to vaccination. No pupil is admitted into the schools unless provided with a vaccination certificate from a regular practicing physician. This is the duty of the teachers and has been rigorously adhered to for several years. In regard to other diseases, scarlet fever and diphtheria, every precaution is taken against exposure. The cases are immediately removed from the school, as are also the pupils from the same family. It is the practice of the physicians of the city to give notice of such cases to the sanitary superintendent and to the school. The care that has been exercised in the sanitary regulations in our schools has gained the full confidence of the people. Physicians of good standing assert that our escape from small-pox is due largely to the continued practice of vaccination in the schools."

Under a recent date Superintendent Tompkins has favored this Board with the following statements based upon the conclusions published in the second annual report of the State Board of Health, and issued in the Board's series of papers [No. 43 a.]

"I give the result of my observations upon points named in the State Board's circular [43 a.]

In regard to school structures, our authorities are giving more attention to the construction of school buildings, with reference to the health of the inmates, and have recently made alterations in buildings that had stood unaltered for several years. Referring to diagram of school building, (primary) recently finished, which was sent with my report, and to which Dr. Lincoln's attention was called at the time of his visit, you will observe that especial pains were taken to secure the best ventilation, light, closet accomodations, etc., to which has lately been added two finished rooms in the basement, easy of access, for playrooms; having also roomy play-grounds around the building. We have introduced in all of our buildings a system of ventilation from which we are receiving good results. The plan is to concentrate flues leading from the floor of the rooms to the attic, into a small room in which is placed a large stove, a large ventilator leading from this room out through the roof. The furnace supplying the pure air warmed. This system of ventilation secures a saving in fuel of ten to twenty per cent, also a greater uniformity in heat, as it makes the circulation constant, avoiding overheating the air, by having circulation through the furnaces interrupted, and sometimes caused by pressure in the rooms from high winds forcing the air into the room or building through openings around the windows. This ventilation exhausts the air from the rooms, creating a partial vacuum. In addition we use the windows and doors so far as we can without exposure; doing this at recess and other times when the building is not occupied, and also instruct our teachers in using the means for ventilation and also, to experiment with the various conditions of the air and temperature. This is important from the fact that *ignorance or carelessness on the part of the teacher in charge can neutralize the best appliances that can be devised.* The variable condition of the air in different locations and in the different rooms of the same building; the effect of different temperatures, both outside and inside, upon the circulation of the air, all point to the necessity of the teacher in charge having an intelligent understanding of the principles governing ventilation and of the appliances used to effect it.

"Overcrowding is an evil which it seems difficult to avoid, particularly in the cities that are growing, as these wants will not be anticipated. In graded schools there will at times be in certain departments an influx that it is impossible to provide for at the time needed. This is an unfortunate state of things, as there is probably no more serious evil, or one from which more harm can come, than this of placing too great a number in a room, as it renders ineffective any ventilation; appearing to destroy its operation to a certain extent, there being a want of the space required for a sufficient circulation of air to make the necessary changes.

"The next question under consideration, that of school-house privies, in many cases is not only an evil, but a disgusting and degrading one as stated in the report (paragraph 5, circular [43a]), the extent of which is but little known to the public at large. The difficulty in reaching it appears to lie in the delicacy of not only teachers (which is natural), but in the parents, in not observing and instructing their children upon a proper discharge of duty in attending to the 'calls of nature' with regularity, cleanliness, privacy, etc. The modesty of many pupils, as well as teachers, prevents familiar conversation upon this topic as in other matters, hence the abuses are continued. In many cases the discomfort attending the duty prevents proper attention to it, and a consequent effect upon the health, while on the other hand, an attempt at bettering the accommodations meets with abuse. Whether from a lack of proper moral training or contact there is often a want of care and common decency with those from whom better things are expected. There is no doubt that the close association rendered necessary by limited conveniences has a contaminating influence upon the morals, from the fact that there will always be in a promiscuous assemblage of children many that are both physically and morally filthy, and this pervades both sexes. The separation should not stop with the sexes, but should at least separate, in addition, the primary pupils from the older classes. In this connection may be considered the point referred to in paragraph 10 circular [43a], as relates to school-recesses; it is believed by those having immediate charge, that a large portion of the immoral practices growing out of the association named are due to the morning and afternoon recesses. From necessity a large number are thrown together at these times, and in undue haste. it is claimed, and experience has proved when the experiment of no recess, A. M. and P. M., has been tried, that these duties may be attended to without confusion to the school, and where perfect freedom is allowed. Upon the merits of this question alone (no recess) I am inclined to the belief, from the results in our schools, that there are many things in its favor, and with appliances for ventilation and proper care in this respect, there can scarcely be an objection. This does not apply to the primary classes, as frequent recreation is given in the way of calisthenics, marching, etc., and out-door exercise when pleasant. Our school authorities are providing play-rooms in the basements for these classes, already having several. I have already extended this paper beyond what I anticipated, particularly that portion in relation to privies, but was prompted to do so by some recent investigations made with reference to these accommodations in our schools, and their baneful effect when located in the basements of school buildings without proper ventilation, and the further question whether they can be sufficiently ventilated to be absolutely safe, using them in connection with water. In our investigations we were prompted to go beyond the mere question of health, comfort, etc., and consider the moral aspect of the case. Our teachers guard carefully the conduct of their pupils as to morals and manners, and in their intercourse as far as possible, which exerts a restraining influence, but it cannot be constant, and we believe it incumbent upon those providing our school accommodations, to close, as far as possible, all avenues that will admit of or create immoral habits and practices, as well as to provide for physical comfort.

"In regard to paragraph 14, there appears to have been in the past but little regard paid to light and the location of pupils with reference to it, and not only pupils but teachers, as there is no doubt that many teachers have suffered also. Pupils receive the first consideration, being more susceptible and in a more fixed position. We are fully aware of these difficulties and are making the changes, having already within three years made many. It is important that teachers investigate the condition of pupils' eyes, particularly with reference to short-sightedness, which parents do not always discover. Pupils become debilitated through these defects. It is our intention to investigate color-blindness in order that the pupil may not select a vocation for which he is incapacitated by this defect.

"The system of vaccination and protection against contagious diseases has been carefully followed and carried out, from which, so far as small-pox is concerned, it is claimed we owe our immunity from the disease. In my suggestions I have doubtless made many with which you are familiar, and have not made any effort to avoid them. In fact I feel that I have said considerable and added but little at best, but will make no farther apology except for the hasty and crude manner in which subjects are considered. I have endeavored to confine myself to the practical aspect of the subjects, without, as stated, advancing any theories.

"I agree fully with the conclusions expressed in the circular."

Respectfully yours,

(Signed) C. B. TOMPKINS,
Superintendent.

There is abundant evidence that the people throughout the State are quite willing to bestow the necessary means — and indeed extraordinarily liberal expenditures — upon the desired improvement of school buildings. A fact germane to this needs to be equally well settled, and the committee thinks it will be, whenever properly presented to the tax-paying inhabitants of the towns, villages and cities. It is this, will the school officers accept, and will the people defray any necessary cost for, the sanitary supervision which schools, seminaries and colleges of every grade require?

. This committee and the entire Board will doubtless ere long be expected to advocate and aid the favorable consideration of this duty for the people of the State. There is no doubt that in the cities and large villages this duty should without further delay be undertaken as a part of the legitimate and most necessary service of the local boards of health. Regarding this as a settled fact, it matters not whether such supervision be by an officer who performs no other labors whatsoever — and who may for that matter be attached to the Department of Public Instruction, in cities at least, to be supported out of its funds, or be attached exclusively to the municipal board of health, the sanitary inspection and care-taking of the schools have become an absolutely indispensable duty, and this duty is binding, first upon the local board of health, whatever school boards may do or neglect to do.

During the past two years there have been investigations not only of private schools, but of colleges and universities within the State of New-York, by officers and experts acting for this Board, and results have been acquired which may not justifiably be published by any authority. Improvements and reforms have followed, and must in all such cases rapidly follow such investigations; yet whenever a house epidemic, or any excessive sickness or mortality occurs in any school or college, this committee seriously doubts if the responsible officers of such institution should object to the publication of the record of the causes of the calamity suffered. Princeton College is to-day all the stronger and more frequented, the country over, for the full exposure of, and the faithful remedy for, the sources of the calamity it suffered a few years since. The same is true of the old Virginia University, and would have been true, had a like policy prevailed, at the Maplewood Female College in Massachusetts, and at various institutions in the State of New York which have suffered a just decadence for omitting to do this.

The committee has, however, broken no confidence, has certainly advised faithfully, and has been met by prompt and creditable response, to its suggestions for improvement in the sanitation of school structures and their outfitting; and whenever the kind of general supervision suggested shall have been secured, there will be little liability to disastrous continuance of the evils which threaten life and health in the schools.

[E.]

REPORT OF THE COMMITTEE ON QUARANTINE.

Throughout the civilized world the quarantine system and its present outfit of artificial islands, two miles off shore, with ample hospitals and a floating boarding-station near the open sea-way, are justly mentioned as worthy the great port and commerce of New York. These facilities for securing the sanitary protection of commerce and of the most crowded entrepôt of emigrants, are the legitimate results of more than a hundred years' of experience. The progress of medical and sanitary knowledge has served to simplify and render more and more efficient these quarantine safeguards of the port of New York, which are, indeed, safeguards of the western continents, and to relieve the commerce of the seas from needless cordons and burdens which, in earlier times, pressed heavily upon maritime trade and the free movement of travelers by sea.

The orders or edicts in council at the port of New York, such as were promulgated in 1702, 1714, 1716 and 1742, "to prevent the importation of small-pox and malignant fevers from the West Indies, and their spread in the provinces;" the Colonial Laws of 1755 "to prevent infectious distempers being brought into this colony, and to hinder the spreading thereof," and all the laws which followed in 1773, 1775, 1784 and 1799, prepared the way for that long series of experiments in the sanitary supervision of vessels, cargoes and passengers which in the course of seventy years during the present century has resulted in the present greatly improved system. The medical facts concerning the portable and pestilent infections and contagions, and the maritime and naval practices and conditions by which such perilous poisons are bred and communicated, seem, at length, to be so clearly settled that the interests of society, as affected in such matters, may be protected with great certainty. The controllable conditions of sanitary safety are found to be comprised under the same heads as apply in the public health service of towns and cities, namely, the inspection of all sources of infectious disease, and the complete destruction of contagious and infectious matter, the cleansing and other necessary policing of ships, of passengers and of unwholesome cargoes, and the adoption of adequate preventive measures against liabilities to small-pox and every lurking exposure to pestilent disorders.

In pursuing the duties of the State quarantine service the labors are divided into those of the lower quarantine station, at and near the artificial island several miles below the Narrows, fronting the open sea-way; and those of the ordinary or upper station between the

Narrows and the commercial anchorage region of the upper bay and harbor of New York.

REPORT of Lower Quarantine for 1882. (*From June 15th, to October 8th.*)

INFECTED PORTS.	Number of vessels arriving during the period of infection.	Number of vessels with sickness.	Number of Sick.			Number of Deaths.		
			In port of departure.	On passage.	In quarantine.	In port of departure.	On passage.	In quarantine.
Aspinwall	7	2	3	2	6	....	1	1
Cardenas	9	....	....	....	....	....	....	....
Cienfuegos	5	....	....	....	....	....	....	....
Havana	71	19	34	4	8	11	1	3
Matanzas	22	1	2	....	....	....	....	....
Neuvitas	3	....	....	....	....	....	....	....
Port au Prince	5	....	....	....	....	....	....	....
Rio Janeiro	1	....	....	....	....	....	....	....
St. Jago de Cuba	5	....	....	....	....	....	....	....
Sagua La Grande	16	....	....	....	....	....	....	....
St. Domingo City	3	3	....	9	5	....	3	....
Vera Cruz	7	....	....	....	....	....	....	....
Pensacola	2	1	....	8	3	....	1	....
	156	26	39	23	22	11	6	4

Total number of vessels inspected at the lower quarantine during the summer and fall of 1882 was 952.

During the year 1882 the number of vessels arriving from foreign ports and inspected at the New York quarantine was 6,650.

The number of vessels arriving from domestic ports south of Cape Henlopen (April 1st to November 1st) and inspected was 2,567.

Total number of vessels inspected at the New York quarantine during the year 1882 was 9,217.

The number of vessels arriving with contagious or infectious diseases was 192.

The number of cases of disease of a contagious and infectious character, discovered on board of vessels, was 879.

Of this number there were, of yellow fever , of small-pox, fifteen cases on transatlantic passenger steamers, on vessels from other ports, principally from Port au Prince, nine cases; of other cases of contagious diseases, other than yellow fever and small-pox, there were 794.

The number of deaths on shipboard in transit to the port of New York was 495. The number of births in transit, 162.

Yellow fever.— The number of cases of yellow fever on vessels arriving at this quarantine during the summer of 1882 was exceptionally few, as compared with the number in many previous years. The same comparative immunity from the ravages of the disease has existed among communities in its habitat in the West Indies. In Havana the death-rate from yellow fever was for a considerable period during the summer months of 1880, upwards of seventy per week. For the week ending July 16, the number of deaths was twenty-two. This proportion of deaths would represent an aggregate number of cases prevailing at Havana during three months of upward of three hundred.

The greatest number of deaths at Havana during any week the past season was sixty-one (July 22). This continued but two or three weeks and fell to fifteen the week preceding August 19; the latter part of August, and during the entire months of September, usually the months in which the harvest of death from this cause is greatest, the number did not exceed eighteen per week.

In localities where, as in Havana, and other parts of the West Indies, yellow fever finds a congenial home throughout the year, and conditions which, during portions of the year, favor its development until the proportions of an epidemic in greater or less degree are reached, it would be both interesting and instructive to have a series of carefully conducted hygrometric and thermometric observations made in connection with a record of the direction and intensity of wind currents.

May 17, 1882. The steamship *City of Washington*, Vera Cruz, 4th; Progresso, 8th; and Havana, 12th, reported one death at sea. The deceased was a steerage passenger received at Progresso, and taken sick soon after leaving Havana. The disease as indicated by the symptoms given by the acting surgeon of the steamer was unquestionably yellow fever. From the history of the case it is evident that the victim had been affected before he came aboard the *City of Washington*. The quarters occupied by the man and all clothing in the same were disinfected, and the steamer was given *pratique* the same day.

June 28. The brig *Trust* arrived at Quarantine from Havana June 5. This vessel entered the port of Havana May 3, and went May 5 to Tallapiedra wharf, an infected locality, to discharge. May 16. Two men were taken sick with yellow fever. May 19. The vessel left the infected wharf and went into the open bay. Between this date and May 30, while yet lying in the open bay, four men were taken with the same disease. May 22 The man died who was removed to the hospital the 16th. The first and second mates were among the sick mentioned, and neither of these had been on shore after the vessel left the infected wharf. The brig was ordered to the upper bay to discharge by lighters.

The steamship *City of Washington*, from Vera Cruz and Havana July 8, arrived at lower quarantine, July 12. Magdalena Costa, a sister from the Convent of the Good Shepherd, came aboard the steamer at Havana. On arrival at quarantine she was sick with yellow fever. The patient was immediately transferred to the hospital at Swinburne Island. The symptoms on admission indicated a fatal termination. The patient died the morning of the 14th. This woman came directly from the convent of the sisters to the steamer. There were and had been no cases of yellow fever in the convent. The infection in this instance was doubtless received on the way from the convent to the steamer, either on the street or at the wharf; the case is interesting chiefly as another proof that sanitary conditions may be secured in limited localities like that of the convent in Havana, which bid defiance to the admission of one of the most virulent infections although intensified by the most favorable conditions for its propagation.

The brig *Mary E. Leighton*, eleven days from Havana, arrived at lower quarantine July 15. This vessel went into the open bay at Havana, June 8, after discharging at an infected wharf. On the

23d, Captain Leighton was taken sick with yellow fever. July 4, the brig sailed for New York. On the 9th, Hans Tallaken, a seaman, was taken sick of yellow fever and on arrival was removed to Swinburne Island hospital, but died during such removal. With the exception of the captain, none of the officers or crew were on shore after the vessel went into the open bay. The inference in this instance is, that the mate and seamen were infected from the lighters that conveyed cargo to the brig, or from the atmosphere of the bay. Had the ship been infected so as to communicate the disease to those of the officers and crew who sickened, others of the officers and crew subjected to the same exposure would in all probability have been attacked; whereas, after the incubative period (five days) had passed after leaving port, no cases occurred. Although not convinced that the *Mary E. Leighton* was an infected vessel, prudence required that she should discharge her cargo in quarantine, and be cleansed and disinfected before going to her dock in the city.

September 1. The bark *Anna Reed* arrived at lower quarantine from Pensacola, August 11. Seven days out, the cabin boy and a seaman were taken sick, but were convalescent on arrival. August 19, John Langdon was taken sick and recovered. August 20, Peter Peterson became ill and died the 25th. August 21, Seaman John Burn was taken sick, and on the 27th, Henry Kinney; both were convalescent on arrival.

John Black and John Verne were taken sick September 1, the day the vessel arrived at quarantine, and were immediately removed to the hospital at Swinburne Island. The first named of these men speedily developed well-marked symptoms of yellow fever, while the latter had intermittent fever with daily paroxysms.

Much to the surprise of the quarantine physician the third day after the admission of Verne he suffered a prolonged exacerbation; the fever thermometer indicated 104, the sclerotic was intensely injected, the urine, hitherto free and without a trace of albumea, speedily became scanty and albuminous. The patient was immediately removed to another ward, and the case was treated as yellow fever. Before the termination, both of these patients exhibited the icteroid peculiarity of this disease in a marked degree. Both of these cases recovered. The vessel was treated as if infected. There was no means of proving or disproving the captain's statements, that there had been no sickness on the bark en route from Havana to Pensacola or while at that place.

The peculiarities of this epidemic of yellow fever at Pensacola and on the Rio Grande, during the summer of 1882, though not properly within the scope of this report, are deserving of brief mention.

The origin of this disease at Pensacola has not been satisfactorily determined so far as ascertained by the writer. Its appearance at Matamoras and Brownsville on the Rio Grande was nearly simultaneous with its advent at Pensacola. It is believed to have been introduced into those localities by returning railroad employees, who came from interior localities in Mexico, via. Vera Cruz and Tampico, where it was prevailing. The first cases occurred about June 29, in Matamoras. It was not until July 29 that a quarantine was enforced by the authorities at Brownsville against Matamoras, too late to prevent the disease reaching the former place.

The disease, from the beginning to the end, was exceptionally mild in its type. The infection advanced along the localities it invaded with unexampled slowness; but it showed little respect for persons. All were made its victims, the acclimated and the unacclimated; those who had passed through epidemics of the disease in other localities, in an equal degree with recent residents and the transient portion of the communities. The disease continued until the material in the remaining population was exhausted, maintaining its mild type to the last. The mortality at Brownsville was about 7.5 per cent, and at Pensacola very nearly 10 per cent. It is not easy to determine the cause of the prevailing mildness of the disease, in view of the fact that the sanitary condition of these localities invited a much more virulent type; particularly in Matamoras, where the filth and habits of a considerable portion of the population seemed to supply all that was necessary for the development of the most fatal form of the disease. The fever was much more fatal at some interior localities in Mexico, as at Camargo and Mier, than in Brownsville or Matamoras; owing perhaps to the need of proper attention and treatment for the sick.

Small-pox— Early in the present year the bills of health from Port au Prince indicated an epidemic condition of small-pox at that place. All the baggage of passengers from that port was, therefore, disinfected on arrival at quarantine, and the passengers themselves were examined as to their protection from the disease by vaccination, and such as were not considered sufficiently protected were vaccinated by the medical officer on duty at quarantine. It is estimated that not less than five thousand persons perished of this disease during the epidemic.

January 11, 1882. The British steamship *Andes* arrived from Port au Prince, December 14, and other Haytien ports at subsequent dates, with one of her crew suffering from small-pox in an advanced stage. The crew, numbering thirty-one, had been vaccinated on board soon after the development of the case. Examination of the crew showed seventeen successful vaccinations. The fourteen in whom the results of vaccination were not apparent were re-vaccinated, and sent to Hoffman Island for observation for a time sufficient to complete fourteen days from the last possible exposure.

January 13. The brig *Ida*, from Port Liberty, December 15, and Cape Haytien, the 22d of the same month, on inspection was found to have one case of small-pox in the thirteenth day of development. The crew of nine men were vaccinated and detained until successful results were obtained from the vaccination.

January 17, 1882. The British bark *Franklin* arrived from Cape Haytien, December 30. On the sixth day out, Neil Hansen was taken sick with small-pox. The case was immediately sent to Riverside Hospital, Blackwell's Island. The vessel disinfected and the crew vaccinated. The vessel was detained until the 22d; in the mean time seven of the eleven vaccinated proved successful; the four in whom no evidence of success was secured, had signs of previous successful vaccination, and it was presumed were not susceptible to the *vaccinia*.

January 27. The Belgian steamship *Belgenland*, from Antwerp, January 14, with three hundred and twenty-eight passengers, arrived at quarantine, having on board one case of small-pox, which had been early and properly isolated. The case was sent to hospital, the passengers and crew were vaccinated, the vessel disinfected and *pratique* given.

The White Star steamship *Republic*, from Liverpool, arrived the 5th of February, with one hundred and eighty-eight steerage passengers, one of whom had *varioloid*. The case was removed, the passengers and crew were vaccinated, the hospital of the vessel thoroughly disinfected and clearance given.

The brig *Ariostos*, from Hayti, January 27, arrived the 8th of February, with one man sick with small-pox. The case was sent to hospital, the crew were vaccinated, the vessel disinfected and *pratique* given.

February 15. The steamship *England*, from Liverpool and Queenstown, the 1st and 2d of February, had one case of small-pox, a woman aged 23 years, who was received on board at Queenstown. The patient was isolated in a hospital located on the main deck, the first day of the appearance of the eruption. The case was removed to hospital, the passengers and crew were vaccinated, and the vessel was disinfected and discharged in a few hours after arrival.

The schooner *Louisa A* arrived March 1 from Port au Prince and Gonives, and reported the mate sick with small-pox the 5th of February. The 9th of the same month he was removed to hospital at Gonives. Disinfection was attempted at the last-named port, but it was feared was not thoroughly accomplished.

The vessel was, therefore, detained twenty-four hours and was fumigated with sulphurous acid gas.

March 8. Charles Austin (colored) was removed from the Seamen's Retreat hospital, at Stapleton, S. I., by the quarantine steamer "*Governor Fenton*," to Riverside hospital, Blackwell's Island, suffering from *typhus fever*. This man came to New York by the British bark *Trossacks*, February 20, from India, 110 days out. The sanitary condition of this vessel when it passed quarantine was good, and the history of the officers and crew gave no evidence of the presence of any contagion. The inference is that after reaching New York he was infected at some of the lodging-houses in which the contagion of typhus was known to have existed.

The steamship *Alene* arrived at quarantine the 11th of March from Port au Prince, and the brig *Lettitia* from the same port March 13, the former with one case of varioloid and the latter with one case of small-pox. After removing the cases to hospital, and the usual disinfection of the quarters occupied by the patients, the vessels proceeded without further delay.

Also on the 13th of March the steamship *Belgenland* arrived from Antwerp February 25, with seven hundred and twenty passengers, one of whom, a child of seven, had varioloid. The child had been successfully vaccinated when an infant. The usual protective measures were adopted and the steamer was discharged.

March 27. James Dunbar, seaman, aged twenty-four years, vaccinated in childhood, suffering with small-pox, was removed to hospital from the National steamship *Holland.* The ninety-four passengers in the steerage and the crew were vaccinated and the vessel was disinfected.

April 12. The steamship *Wisconsin,* from Liverpool, the 1st, arrived at quarantine and reported all well. Richard Smith, lampman on the *Wisconsin,* aged sixty-three years, was sent to St. Vincent's hospital the day after he arrived. Three days subsequent to his admission to St. Vincent's he was transferred to the contagious hospital at Blackwell's Island with well-marked symptoms of typhus fever. On inquiry it was ascertained that he was doing duty when the vessel passed quarantine and had not reported as ill to the surgeon of the steamer. The presumption is unavoidable that the contagion was received before leaving Liverpool and was yet latent when he arrived at quarantine.

The steamship *Cimbria,* with eight hundred and fifty-five passengers in the steerage, arrived April 13, from Hamburg, March 29. A child, aged six months, was sick with small-pox. It had been isolated the 4th, the day previous to the appearance of the eruption. Passengers and crew were vaccinated and the vessel disinfected after the removal of the patient to hospital.

The steamship *Anchoria,* from Glasgow, April 10, with eight hundred and eighty-five steerage passengers, arrived April 24 with one case of small-pox, Mathilda Hansen, aged twenty-five years. The case was isolated the first day of sickness. All steerage passengers were examined and with few exceptions vaccinated.

The steamship *Lake Champlain,* from Liverpool fourteen and one-half days, with three hundred and six passengers in the steerage, arrived April 27, with one case of small-pox. After removal of patient, vaccination of passengers, and the usual disinfection of ship's hospital, *pratique* was given.

The coasting steamship, *Richmond,* from Norfolk and Richmond, Va., arrived May 10, with one case of small-pox. The sick was removed, the crew were vaccinated, the steamer's hospital quarters were disinfected and *pratique* was given.

May 20. The steamships *Assyrian Monarch* arrived from London, the *Donan* from Bremen, and the *Gellert* from Hamburg, the former with two cases of small-pox, and the others with one case each, and an aggregate of two thousand nine hundred and eighteen immigrants. All were examined, and such as were insufficiently protected by previous vaccination were vaccinated, the sick were transferred to the contagious disease hospital at Blackwell's Island, and the hospitals were disinfected in season to allow the vessels to reach their docks the same day.

June 3, 1882. The steamship *City of Paris* arrived from Liverpool and Queenstown, May 23 and 24, with fifteen hundred and one steerage passengers. The ship's surgeon commenced examining passengers immediately after leaving Liverpool and vaccinated two hundred. The remaining number, thirteen hundred and four, were considered by the surgeon to be sufficiently protected by previous vaccination. The surgeon observed on the 24th, the day after their coming on board, that two passengers taken at Liverpool gave evidence of an eruption which he diagnosed as varioloid. These persons, named Peter Unguist, aged thirty-one, and Carl Langren, aged eleven years (Swedes), had good vaccination cicatrices, both having been vaccinated in early childhood. These cases were immediately isolated in a hospital on main deck, until the 31st, when the eruption had disappeared and the patients so wholly free from any evidence of disease, as claimed by the surgeon, that they were discharged from the hospital. On arrival at quarantine three days later, there were no evidences or traces of an eruption. It is probable that they were cases of varicella; but the ship's surgeon stoutly maintained that they were cases of varioloid. If they were *cases of varioloid* the dismissal was so early from hospital, and there having been no disinfection of clothing, there was great danger of the cases infecting other persons in the steerage after their dismissal. The passengers consequently were all examined at quarantine and twelve hundred of them were vaccinated, all being subjected to vaccination but children with good evidence of previous vaccination, and the vessel was given *pratique* after being disinfected. If the surgeon was correct in his diagnosis the vaccination of those who had been infected by the dismissal of the patient from hospital without proper care would, in all probability, prevent the development of the contagion, as the *vaccinia* would anticipate the development of the contagion. Of the two hundred vaccinations by the surgeon, not one case was found to have been successful.

Other instances of cases diagnosticated as small-pox by ship's surgeons and their discharge from hospital before reaching quarantine have occurred. It is not often in such cases that the clothing, bedding and rooms occupied by such persons have been efficiently disinfected. Indeed the ignorance of some surgeons as to the measures necessary to secure satisfactory disinfection is surprising. One ship's surgeon assured the Health Officer that he had disinfected the quarters occupied by a patient ill with a severe type of the disease, by sprinkling carbolic acid powder around the room — a patent so-called "disinfectant," of no value whatever except to disguise, by its strong and characteristic odor, other disagreeable smells. Another surgeon, on being asked if he had sulphur on board to disinfect his hospital from which a case of small-pox had been removed, assured the Health Officer that he had a sufficient quantity; on being asked the amount available for that purpose, he promptly replied, "about half a pound."

In a great majority of cases, the sick of this disease are judiciously isolated, but in a few instances the attendants, or family of the patient, are not sufficiently guarded to prevent their frequent communication with fellow passengers after ministering to the wants of the sick.

The mischief which may be caused by a single garment that has been in contact with this highly contagious disease, even after the lapse of considerable time, is sometimes difficult for the inexperienced medical attendant to comprehend. The care and watchfulness necessary at our maritime quarantines to secure the public against the dissemination of this contagion is often illustrated in a marked degree. In the year 1880, the bark *Kings County* arrived from Amsterdam. One man had died on the passage, the fifth day of his sickness, and was buried at sea. The captain, who was his sole attendant, was only able to describe the disease as being characterized by "dark, bloodylooking spots." Under the suspicion that it was a case of a hemrorhagic small-pox, the bark was detained at quarantine for observation, notwithstanding the captain's protest, and his earnestly expressed conviction that none of the crew could have been exposed to the disease. Remonstrance proving useless in securing the release of his vessel, he urged the necessity of going to the custom-house to enter his vessel. This he was permitted to do only after changing all clothing that had been worn while caring for the sick man, and wearing such clothing as had no suspicion of contact with the contagion. The third day of the detention of the bark, two of the crew were taken sick with small-pox, and the fourth day a third man became ill of the same disease. Had this vessel been suffered to proceed without detention, there is great probability that the master of the vessel would have scattered contagion far and wide, by contact with the crowd that every hour of business days frequent that busy mart, as he had conveyed it to the susceptible portion of his own crew; and they in turn would have signalized their return to friends far away, or to cities that environ the port, by spreading among them the contagion of this loathsome and fatal disease.

In the early part of the present year, the necessity of a repetition of the often repeated and published rules and regulations was apparent, owing to the neglect of some of the surgeons of steamships and the change and removal of others, and the substitution of inexperienced medical officers. The following circular was accordingly issued and put into the hands of every surgeon on transatlantic passenger steamers, through their agents or owners at this port.

CIRCULAR.

HEALTH OFFICER'S DEPARTMENT, STATE OF NEW YORK.

To Medical Officers of Transatlantic Passenger Steamship Lines entering the Port of New York:

To insure the better protection of the health of the people of the United States from the introduction of contagious and infectious diseases by immigrants arriving at this port, and for the benefit of the commercial interests affected by such quarantine restrictions as may be considered necessary to secure the first-named result, the following regulations are instituted and enjoined upon all officers and particularly surgeons of vessels carrying immigrant passengers:

1. The examination of all steerage passengers by the surgeon of the steamer within twenty-four hours after they embark, to ascertain if they are sufficiently protected from small-pox by vaccination, and the vaccination of all persons not sufficiently protected.
2. The re-examination of persons vaccinated by the ship's surgeon before entering port, and the re-vaccination of those whose vaccination has not been successful.
3. The distribution of vaccination cards to all persons protected sufficiently by previous vaccination, and by the successful vaccination of the surgeon of the steamship.

FORM OF CARD.

NAME OF STEAMSHIP.

DATE WHEN ISSUED.

VACCINATED.

Name of Surgeon,

On the reverse side must be printed in three or four of the principal European languages the following :

"Keep this card to avoid detention at quarantine and on railroads in the United States."

4. At least two hospitals should be supplied by every passenger steamship; one for contagious, and one for non-contagious diseases.

5. All persons with contagious disease should be isolated in hospitals, not opening into the steerage or crowded gang-ways frequented by passengers.

6. Communication with such hospitals, when occupied, must be strictly forbidden, and the attendant of the sick not permitted to come in contact with other persons.

7. Vaccine virus should be obtained from the most reliable sources, and kept until used in a temperature not above 55 deg. F. nor below freezing. A compartment in a refrigerator where the temperature is uniform is suggested as a proper place for this purpose. Many failures in the vaccinations made by ship's surgeons are noticed in consequence of imperfect virus.

8. All persons suspected of having contagious diseases, particularly small-pox and typhus fever, must be isolated on the appearance of the initial symptoms. Frequent visits to the steerage and close observation of passengers by the ship's surgeon is earnestly enjoined.

Persons having, or suspected of having, the above-named diseases should not be discharged from hospital until arrival at quarantine, that the responsibility of discharge or removal to hospital may be assumed by the Health Officer.

Attention to these regulations will save the passenger steamships time and expense at the New York quarantine.

WM. M. SMITH,
Health Officer, Port of New York.

The steamship *France* with seven hundred and twenty-one steerage arrived at quarantine June 7. Caroline Gossi, aged thirty-one, was taken sick June 3 with small-pox. She had been successfully vaccinated when a child, and was again vaccinated on the 29th of May by the ship's surgeon, but unsuccessfully.

July 1. One case of small-pox was removed from the steamship *DeRuyter* from Antwerp with two hundred and forty-two steerage passengers. The surgeon of the steamer had vaccinated all. Examination at quarantine showed that but ten of his vaccinations were successful. All steerage passengers were again vaccinated, except those on whom the vaccinations by the surgeon were found successful.

The steamship *Geiser*, with seven hundred and twenty-eight steerage passengers from Copenhagen, arrived July 2, eighteen days from the port of departure. The surgeon reported one case of varioloid since leaving port that had recovered and had been discharged from hospital. That the case should have occurred and recovered between the 16th and the date of arrival, leaving not a trace on the patient, afforded ground for suspicion that the surgeon's diagnosis was not correct. But there was no means of proving or disproving it, and as the patient had mingled again with his fellow passengers, they were all again vaccinated except the few successful vaccinations made by the ship's surgeon, the hospital quarters were disinfected and *pratique* was given the vessel the same day.

July 22. The steamship *Halley* arrived from Santos June 21 and Rio Janeiro the 25th. Christina Pederson, a passenger, had small-pox. The eruption appeared July 17. The isolation of the case was not satisfactory. The case was removed to the small-pox hospital. The passengers and crew were vaccinated, and the passengers and patient were removed to Hoffman Island for observation until the completion of the period of incubation from the time of exposure.

August 10. The steamship *Columbia* arrived from Mediterranean ports with one hundred and two passengers, who embarked at Naples July 23. Six days before arrival a steerage passenger was observed to have a suspicious eruption. The case was immediately isolated. On arrival at quarantine the eruption had not reached the pustular stage, but was evidently abortive, in obedience to the influence of the *vaccinia* introduced by the surgeon of the *Columbia* a few days after leaving Naples. The case was removed to hospital, and passengers and vessel were treated as in other cases.

Believing that successful vaccination of those immigrants who were insufficiently protected, before leaving home, at the port of departure, or soon after embarking, would insure entire protection to the people of the United States from this contagion introduced by immigrants, the health officer has employed his most diligent efforts to secure this result. The distribution of circulars by the soliciting agents of the transatlantic passenger steamship companies, among intending passengers, warning them to be vaccinated before leaving in order "to avoid detention at the New York quarantine," and the unusual care exercised in the examination of the resorts of immigrants at the port of embarkation have contributed to secure far greater immunity from this disease among immigrants arriving at this port during recent years, and particularly the last six months. A persistent effort has been made during the year last past to induce surgeons of passenger steamers to examine the immigrants and vaccinate the insufficiently protected within twenty-four hours after they are received on board; feeling assured that if this was done the contagion of small-pox which they may have received en route to, or at the port of departure, within two or three days previous to vaccination, would be arrested in its development. The success in securing the examination and vaccination of immigrants within the first twenty-four hours after leaving port has not been commensurate with the effort made. The "sea sickness" which very generally prostrates a great portion of the passengers soon after the voyage is commenced, continues several days, making it next to impossible for the surgeon in some cases to give the desired attention to this duty, and in others, and in many instances, affords a good excuse for neglecting it.

Table showing the ratio in 1,000 *of emigrant passengers vaccinated by the surgeons on the voyages of the respective steamship lines.*

Name of Steamship Line.	Ratio in 1000 passengers.	Name of Steamship Line.	Ratio in 1000 passengers.
North German Lloyds	952	Seager Bros. Beaver Line	50
Hamburg American Packet Company	607	Seager Bros. Caar Line	50
General Transatlantic Company	355	Amsterdam Line	282
Inman Line	108	Cunard Line	270
White Star Line	143	White Cross	542
Guion Line	109	Monarch Line	74
Anchor Line	508	Lyons & Co	120
National Line	80	Floris Line	30
Royal Mail	109	Bordeaux Line	796
Thingvalla	66	Great Western Line	487
State Line	71	C. L. Wright & Co	967
Red Star Line	452		

The following table exhibits the average time of examination and vaccination of immigrants by the surgeons of the principal lines, after leaving the port of departure:

North German Lloyds	5	Days.	Seager Bros. Beaver Line	8 1-2	Days.
Hamburg American Packet Co	4 2-7	"	Seager Bros. Caar Line.	4	"
General Transatlantic Co	2 1-2	"	State Line	7	"
Inman Line	7 2-5	"	Cunard Line	4 3-5	"
White Star Line	3 1-5	"	White Cross Line	3	"
Guion Line	4 2-5	"	Monarch Line	9	"
Red Star Line	3 3-5	"	Lyons & Co	13	"
Anchor Line	3 2-7	"	Bordeaux Line	2	"
National Line	9 1-2	"	Great Western Line	12	"
Royal Mail to the Netherlands	8 1-3	"	C. L. Wright & Co	8 3-5	"
Thingvalla Line	16	"	Florio Line		
Amsterdam Line	4	"			

The results of vaccinations by ships' surgeons during the early part of the year were not satisfactory. In a large proportion of them no results were obtained. The *virus* when obtained was frequently defective; in many instances the *vaccina* was doubtless good when procured, but, being kept several days in the quarters of the surgeon before it was used, deteriorated, and often became wholly inert.

In every case of inefficient management on the part of the surgeon, or of unsatisfactory results from his vaccination, the consignees or owners of the steamer whose surgeon was derelict were notified of the fact; and at the first subsequent arrival of the vessel it was detained until every immigrant's arm was examined, and the evidence of satisfactory previous vaccination obtained, or vaccination was secured by the medical officers at quarantine.

The results obtained by the surgeons during the latter part of the past year are for the most part satisfactory. This work shows great improvement in every respect.

The percentage of successful results of vaccination on board the ships of the lines named during the month of December is given below:

North German Lloyds	26 1-2	Seager Bros. Beaver Line	12 1-2
Hamburg American Packet Co	03 1-2	Seager Bros. Caar Line	06 1-2
General Transatlantic Co	10 4-5	Amsterdam Line	41 3-5
Inman Line	91 1-2	Cunard Line	55 1-5
White Star Line	88	White Cross Line	37 1-5
Guion Line	86 1-10	Monarch Line	......
Red Star Line	66 3-5	Lyons & Co	......
Anchor Line	75	Bordeaux Line	......
National Line	91	Great Western Line	35 4-5
Royal Mail to the Netherlands	40 4-5	C. L. Wright & Co	04 3-10
Thingvalla Line	40	State Line	35 1-10
Florio Line	......		

The English lines have much the largest ratio of successful results, but in justice to the other lines, particularly the German, it should be stated that the surgeons of the latter vaccinate a much larger proportion of their immigrant passengers than the surgeons of the former. The English surgeons as a rule have vaccinated only those who have no evidence of previous protection, or in whom it is very obscure. The German surgeons have vaccinated a large percentage of all steerage passengers, nearly four-fifths; the surgeons of the Bremen, or North German Lloyd Steamship Company, one of the two German lines, have vaccinated ninety-six-one-hundredths of all immigrant passengers transported by that line, while the English surgeons have vaccinated one-seventh of the aggregate number of immigrants on vessels from ports in the British Isles. The greater susceptibility of those who have never been vaccinated and who are almost exclusively selected by the English surgeons should be placed to the credit of the German surgeons who vaccinate many who are insusceptible to the *vaccinia.* The industry and fidelity of the German surgeons in discharging this duty have been conspicuous, notwithstanding the fact that the results have not been commensurate with their efforts, owing in considerable degree to the defective quality of the vaccine virus used. Surgeons of passenger steamers very generally regard the examination of immigrants as to their protection from small-pox, and the vaccination of the unprotected, as an unusual and burdensome duty. The tendency to discharge it with little regard for the desired result, or neglect it entirely, is much too frequent. A constant, systematic and careful investigation of their work is necessary to secure the performance of the duties imposed upon them by the "rules and regulations of the New York quarantine". The coöperation of the agents and owners of the principal lines has been for the most part cheerful and satisfactory. Surgeons who have been remiss in the discharge of a duty are notified of their neglect or failure through an open communication from the Health Officer addressed to the surgeon, in care of the manager or owner of the line. The following letters will illustrate this, and the several replies indicate the spirit in which the communication is generally received.

"HEALTH OFFICER'S DEPT., STATE OF NEW YORK,
QUARANTINE, S. I., *November* 23, 1882.

"*To the Surgeon of the Steamship* ——— :

"DEAR SIR — On your arrival at this port November, 1882, you certified to having vaccinated two hundred and fifty of the immigrant passengers. Examination of these at this quarantine discovered evidences of but eight having been vaccinated; two of this number successfully. There is occasion to believe that your work was not efficiently performed; and the late day of the vaccinations, the sixteenth, after leaving the port of departure, affords no evidence of protection against the contagion of small-pox which may have been received previous to embarkation.

"Earlier vaccination, and more careful discharge of that duty is respectfully urged.

(Signed) WM. M. SMITH,
Health Office, Port of New York."

REPLY.

"Office of the Hamburg American Packet Co.,
New York, *November* 24, 1882.

"Dr. Wm. M. Smith, *Health Officer, Quarantine, S. I.:*

"Dear Sir — Acknowledging receipt of your esteemed lines of the 23d inst., we beg to inform you that we have had copies made of your letter addressed to the surgeon of the ———, which will be sent to all the surgeons of our lines, accompanied by renewed instructions to comply strictly with the recommendations made by you respecting the vaccination of immigrants. We are, dear sir, very respectfully yours truly,

(Signed) KUNHARDT & CO."

"Health Officer's Dept., State of New York,
Quarantine, S. I., *December* 5, 1882.

"Messrs. Peter Wright and Sons, *Agents of the Red Star Line:*

"Gentlemen — I desire to call the attention of the steamer ———, to the fact that the examination of the immigrant inspector at this quarantine discovers that but about one vaccination in sixteen was successful. It is believed that the vaccine virus was inert or nearly so, or that the work of the surgeon was very imperfectly done. Considering the results by surgeons of other steamers, the result is not commendable. Hoping you will be able to influence the surgeon of the ——— to more efficient work, I remain,

Very truly,
(Signed) WM. M. SMITH,
Health Officer, Port of New York.

REPLY.

Office of the Red Star Line,
New York, *December* 7, 1882.

Dr. Wm. M. Smith, *Health Officer, Port of New York:*

Dear Sir — Your favor of the 5th is received and noted. We will instruct our agents at Antwerp to investigate the cause of failure of the vaccinations by the surgeon of the steamship , and to adopt such measures as to prevent a recurrence of the same. Thanking you for your prompt notice, we are, Yours truly.

(Signed) PETER WRIGHT & SONS,
Per C. A. Cook.

Health Officer's Dept., State of New York,
Quarantine, S. I., *December* 4, 1882.

Messrs. Phelps Bros. & Co., *Agents of the Steamship:*

Gentlemen — I desire to inform you that the omission of duty on the part of the surgeon of the in respect to the examination of her passengers as to their protection by vaccination from small-pox was so marked as to deserve the censure of the quarantine authorities at this port. No examination or vaccination had been made by the surgeon or cards issued. On a previous voyage to this port he had issued cards certifying protection without any examination of the passengers, he is, therefore, entitled to small measure of credit for not issuing cards on this occasion. I regret to inform you that detention of passengers and vessel will be necessary in the future until the duty of the surgeon of the is faithfully discharged.

Respectfully yours,
(Signed) WM. M. SMITH,
Health Officer, Port of New York.

REPLY.

PHELPS BROS., AGENTS OF THE MEDITERRANEAN
AND NEW YORK STEAMSHIP CO.,
NEW YORK, *December* 5, 1882.

WM. M. SMITH, M. D., *Quarantine, S. I.:*

DEAR SIR — Your favor of the 4th inst. ex. steamship, duly received, and contents have our careful attention. We have written fully to the company in regard to the matter, and feel sure it will be properly attended to henceforward.

Yours truly,
PHELPS BROS. & CO.,
Per S. VANHARTY.

HEALTH OFFICER'S DEPT. STATE OF NEW YORK,
QUARANTINE, S. I.

Manager General Transatlantic Co.:

DEAR SIR — On the recent voyage of the steamship to this port terminating November , the three hundred and fifty-six immigrants brought by her were examined by the immigrant inspector at this quarantine, although the surgeon certified to having vaccinated, twenty-five of this number not showing evidence of the surgeon's vaccination. One hundred and eighty had satisfactory evidence of previous vaccination. One hundred and seventy-one did not have such evidence; these were vaccinated at quarantine. The vaccinations above referred to, or claimed by the surgeon to have been made, if made at all, were not made until the twelfth day after leaving port. It is respectfully suggested to the consignees and owners of this steamship, that early, and more efficient work by the surgeon will not only be for the interests of the company in securing the prompt discharge of vessels from quarantine, but will more successfully protect the lives and health of the people of the United States.

Very truly,
(Signed) WM. M. SMITH,
Health Officer, Port of New York.

The sanitation of passenger steamers has received much consideration from its intimate connection with the sea-mortality on board and the health of the people of the United States. The General Passenger Act of Congress, that became operative November 1, 1882, makes generous provisions for the safety and comfort of well immigrant passengers, but in the matter of hospitals is surprisingly defective in most material respects, namely, their location and isolation. Previous to this act, no mention of the hospital was ever made in any law of Congress regulating the passenger traffic ; there is, therefore, some means for congratulating immigrants, and in a greater degree the people of this country, that the sick on passenger steamers, if not the public, are considered deserving of some consideration. Further cause for such congratulation will hereafter appear.

From a report made to the British Parliament in the year 1849, it appears "that when the system of transportation was first adopted in some of the eastern voyages, full one-half of those embarked were lost."

The mortality on immigrant ships attracted the attention of the Senate of the United States in 1853, and the 7th of December of that year a select committee was appointed "to consider the causes and extent of the sickness and mortality prevailing on board the immigrant ships on the voyage to this country." The report of this committee show, that 36,950 passengers arrived at New York between September 1, 1853, and the first of the following January, and that the ratio of mortality during the passage was 52.3 per 1,000, while four hundred and fifty-seven sick were sent to hospital on arrival, many of whom doubtless contributed to increase this surprising mortality. The report of the Senate committee referred to, takes into consideration "the propriety of employing regular physicians and nurses and hospital attendants on board of passenger ships," but comes to the remarkable conclusion that "the committee are decidedly of the opinion that such an arrangement would be desirable ; but taking into view the uncertainty of the number of passengers that may be on board, and other circumstances, they cannot see how it can properly be made the subject of effective legislation." The Passenger Act of 1882 is in striking contrast with the conclusions of the Senate committee in 1853.

WASHINGTON, D. C., *August* 17, 1882.

The following act, which repeals and supersedes, on and after November 1, 1882, *existing laws relating to the transportation of immigrants, and which is to be cited for all purposes as the Passenger Act,* 1882, *is published for the information and guidance of officers of the customs and others concerned.*

AN ACT to regulate the carriage of passengers by sea.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled :

SECTION 1. That it shall not be lawful for the master of a steamship or other vessel whereon immigrant passengers, or passengers other than cabin passengers, have been taken at any port or place in a foreign country or dominion (ports and places in foreign territory contiguous to the United States excepted) to bring such vessel and passengers to any port or place in the United States, unless the compartments, spaces and accommodations hereinafter mentioned have been provided, allotted, maintained and used for and by such passengers during the entire voyage; that is to say, in a steamship, the compartments or spaces, unobstructed by cargo, stores or goods, shall be of sufficient dimensions to allow for each and every passenger carried or brought therein one hundred cubic feet, if the compartment or space is located on the main deck or on the first deck next below the main deck of the vessel, and one hundred and twenty cubic feet for each passenger carried or brought therein if the compartment or space is located on the second deck below the main deck of the vessel; and it shall not be lawful to carry or bring passengers on any deck other than the decks above mentioned. And in sailing vessels such passengers shall be carried or brought only on the deck (not being an orlop deck) that is next below the main deck of the vessel, or in a poop or deck-house constructed on the main deck; and the compartment or space, unobstructed by cargo or goods, shall be of sufficient dimensions to allow one hundred and ten cubic feet to each and every passenger brought therein. And such passengers shall not be carried or brought in any between-decks, nor in any compartment, space, poop or deck-house, the height of which from deck to deck is less than six feet. In computing the number of such passengers carried or brought in any vessel, children under one year of age shall not be included, and two children between one and eight years of age shall be counted as one passenger; and any person brought in such vessel who shall have been, during the voyage, taken from any other vessel wrecked or in distress on the high seas, or have been picked up at sea from any boat, raft, or otherwise, shall not be included in such computation. The master of a vessel coming to a port or place in the United States in violation of either of the provisions of this section shall be guilty of a misdemeanor; and if the number of passengers other than cabin passengers carried or brought in the vessel, or in any compartment, space, poop or deck-house thereof, is greater than the number allowed to be carried or brought therein, respectively, as hereinbefore prescribed, the said master shall be fined fifty dollars for each and every passenger in excess of the proper number, and may also be imprisoned not exceeding six months.

§ 2. That in every such steamship or other vessel there shall be a sufficient number of berths for the proper accommodation, as hereinafter provided, of all such passengers. There shall not be on any deck nor in any compartment or space occupied by such passengers more than two tiers of berths. The berths shall be properly constructed, and be separated from each other by partitions, as berths are ordinarily separated, and each berth shall be at least two feet in width and six feet in length; and the interval between the floor or lower part of the lower tier of berths and the deck beneath them shall not be less than six inches, nor the interval between each tier of berths, and the interval between the uppermost tier and the deck above it, less than two feet six inches; and each berth shall be occupied by not more than one passenger over eight years of age; but double berths of twice the above-mentioned width may be provided, each double berth to be occupied by no more and by none other than two women, or by one woman and two children under the age of eight years, or by husband and wife, or by a man and two of his own children under the age of eight years, or by two men personally acquainted with each other. All the male passengers upwards of fourteen years of age who do not occupy berths with their wives shall be berthed in the fore part of the vessel, in a compartment divided off from the space or spaces appropriated to the other passengers by a substantial and well-secured bulk-head; and unmarried female passengers shall be berthed in a compartment separated from the spaces occupied by other passengers by a substantial and well-constructed bulk-head, the opening or communication from which to an adjoining passenger space shall be so constructed that it can be closed and secured. Families, however, shall not be separated except with their consent. Each berth shall be numbered serially, on the outside berth-board, according to the number of passengers that may lawfully occupy the berth; and the berths occupied by such passengers shall not be removed or taken down until the expiration of twelve hours from the time of entry, unless previously inspected within a shorter period. For any violation of either of the provisions of this section, the master of the vessel shall be liable to a fine of five dollars for each passenger carried or brought on the vessel.

§ 3. That every such steamship or other vessel shall have adequate provision for affording light and air to the passenger decks, and to the compartments and spaces occupied by such passengers, and with adequate means and appliances for ventilating the said compartments and spaces. To compartments having sufficient space for fifty or more of such passengers, at least two ventilators, each not less than twelve inches in diameter, shall be provided, one of which ventilators shall be inserted in the forward part of the compartment, and the other in the after part thereof, and shall be so constructed as to ventilate the compartment; and additional ventilators shall be provided for each compartment in the proportion of two ventilators for each additional fifty of such passengers carried or brought in the compartment. All ventilators shall be carried at least six feet above the uppermost deck of the vessel, and shall be of the most approved form and construction. In any steamship the ventilating apparatus provided, or any method of ventilating adopted thereon, which has been approved by the proper emigration officers at the port or place from which such vessel was cleared, shall be deemed a compliance with the foregoing provisions; and in all vessels carrying or bringing such passengers there shall be properly constructed hatch-ways over the compartments or spaces occupied by such passengers, which hatch-way shall be properly covered with houses or booby hatches, and the combing or sills of which shall rise at least six inches above the deck; and there shall be proper companion-ways or ladders from each hatch-way leading to the compartments or spaces occupied by such passengers; and the said companion-ways or ladders shall be securely constructed, and be provided with hand-rails or strong rope, and, when weather will permit, such passengers shall have the use of each hatch-way situated over the compartments or spaces appropriated to their use; and every vessel carrying or bringing passengers shall have a proper located and constructed caboose and cooking-range, or other cooking-apparatus, the dimensions and capacity of which shall be sufficient to provide for properly cooking and preparing the food of all such passengers. In every vessel carrying or bringing such passengers there shall be at least two water-closets or privies, and an additional water-closet or privy for every one hundred male passengers on board, for the exclusive use of such male passengers, and an additional water-closet or privy for every fifty female passengers on board, for the exclusive use of the female passengers and young children on board. The aforesaid water-closets and privies shall be properly inclosed and located on each side of the vessel, and shall be separated from passengers' spaces by substantial and properly-constructed partitions or bulkheads; and the water-closets and privies shall be kept and maintained in a serviceable and cleanly condition throughout the voyage. For any violation of either of the provisions of this section, or for any neglect to conform to the requirements thereof, the master of the vessel shall be liable to a penalty not exceeding two hundred and fifty dollars.

§ 4. An allowance of good, wholesome, and proper food, with a reasonable quantity of fresh provisions, which food shall be equal in value to one and one-half navy rations of the United States, and of fresh water, not less than four quarts per day, shall be furnished each of such passengers. Three meals shall be served daily, at regular and stated hours, of which hours sufficient notice shall be given. If any such passengers shall at any time during the voyage be put on short allowance for food and water, the master of the vessel shall pay to each passenger three dollars for each and every day the passenger may have been put on short allowance, except in case of accidents, where the captain is obliged to put the passengers on short allowance. Mothers with infants and young children shall be furnished the necessary quantity of wholesome milk or condensed milk for the sustenance of the latter. Tables and seats shall be provided for the use of passengers at regular meals. And for every willful violation of any of the provisions of this section the master of the vessel shall be deemed guilty of a misdemeanor and shall be fined not more than five hundred dollars, and be imprisoned for a term not exceeding six months. The enforcement of this penalty, however, shall not affect the civil responsibility of the master and owners of the vessel to such passengers as may have suffered from any negligence, breach of contract, or default of such master and owners.

§ 5. That in every such steamship or other vessel there shall be properly built and secured, or divided off from other spaces, two compartments or spaces to be used exclusively as hospitals for such passengers, one for men and the other for women. The hospitals shall be located in a space not below the deck next below the main deck of the vessel. The hospital spaces shall in no case be less than in the proportion of eighteen clear superficial feet for every fifty such passengers who are carried or brought on the vessel, and such hospitals shall be supplied with proper beds, bedding and utensils, and be kept so supplied throughout the voyage. And every steamship or other vessel carrying or bringing immigrant passengers, or passengers other than cabin passengers, exceeding fifty in number, shall carry a duly qualified and competent surgeon or medical practitioner, who shall be rated as such in the ship's articles, and who shall be provided with surgical instruments, medical comforts, and medicines proper and necessary for diseases and accidents incident to sea-voyages, and for the proper medical treatment of such passengers during the voyage, and with such articles of food and nourishment as may be proper and necessary for preserving the health of infants and young children; and the services of such surgeon or medical practitioner shall be promptly given, in any case of sickness or disease, to any of the passengers, or to any infant or young child of any such passengers, who may need his services. For a violation of either of the provisions of this section the master of the vessel shall be liable to a penalty not exceeding two hundred and fifty dollars."

The death-rate on passenger steamers would doubtless be much greater at the present time than it is, if the conditions to which passengers are subjected on many of our ocean steamers, in the matter of defective ventilation, improper food, and crowded steerages were supplemented by the unavoidable conditions to which the same class of people are subjected on land. In other words, the pure air which prevails on the ocean, the vigorous condition of health with which the immigrant sets forth upon his long journey, the high hopes of prosperity in his anticipated new home, and the fact that nine-tenths of the immigrants to this country are superior in endurance to the population they leave behind, lead us to expect that mortality *in transitu* will be exceptionally small. The statistics which relate to the sickness and mortality among immigrants arriving at this port on the different lines during the six months ending December 31, 1882, are briefly expressed in the following table:

NAME OF STEAMSHIP LINE.	Total number of Emigrants.	Number of Deaths.	Ratio of deaths in one thous'd
North German Lloyd	30,540	46	1.50
Hamburg American Packet Co	28,834	28	.98
General Transatlantic Co	14,607	9	.61
Inman Line	12,069	11	.91
White Star Line	10,895	6	.55
Guion Line	10,544	7	.66
Red Star Line	10,115	12	1.18
Anchor Line	9,979	2	.20
National Line	9,779	12	1.23
Royal Mail Line	6,436	7	1.08
Thingvalla Line	6,038	6	.99
C. L. Wright & Co	343	......	....
Beaver Line } Seager Bros.	179	......	....
Carr Line.. } Seager Bros.	6,626	4	.60
Amsterdam Line	5,763	18	3.12
Cunard Line	4,228	5	1.15
White Cross Line	2,192	......	....
Monarch Line	1,335	......	....
Lyons & Co	1,263	2	1.58
Florio Line	631	1	1.58
Bordeaux Line	743	1	1.36
Great Western Line	620	......	....
State Line	4,397	9	2.04

In many respects the accommodations for the comfort and safety of immigrant passengers have been improved within the last three years. Many new steamers have been added to this portion of the world's merchant marine within that period, and with very few exceptions they have been materially improved, with a view to the comfort and safety of passengers.

In a communication published in the second volume of the Reports of the New York State Board of Health the writer endeavored to show that immigration is not only a feature of the social, political and economical problems of to-day, but will become an important condition in the solution of these problems for years to come. Boundless wealth in soil continental in area, exhaustless mineral wealth, untold millions in primitive forests, and the freedom which has no trace of the old world's tyrannies, invite to our shores the strong arms and willing hearts of European communities. An army greater than Napoleon led into Russia in 1812 has passed into the United States during the year past, not with banners and martial step, but in peaceful and unobtrusive procession, mingling and quickly merging with the preexisting population, and contributing to the material prosperity of the whole country. More than one-fifth of the number which represents the present population of the United States have landed on our shores since the year 1820 as aliens, and have become a part of the bone and sinew of the people. If, then, present conditions are to continue; if prospects of prosperity and happiness in the new world are to invite the immigrant for an undetermined, but at least considerable time in the future, and his coming is to be greeted with the generous welcome hitherto extended, it is eminently proper that it should be associated with such sanitary conditions as will protect the lives and health of the people of the United States. The gateways of the great highway of nations are at our maritime ports. If these admit immigrants with latent or developed germs of contagious or infectious disease to our seaboard cities or inland populations, the strategic position, the vantage ground is lost in the contest with these subtle and malignant foes of the human race. A much greater effort will be required to pursue and destroy disease when its forces are recruited and multiplied in the crowds of cities, along the great thoroughfare of travel and among distant and widely separated interior communities. The quarantines at our ports of entry should be the location for faithful sentinels who warn the people of the approach, and protect them from the introduction of contagious and infectious diseases.

The detection and removal of developed cases of infectious or contagious diseases is a plain and important duty, but by no means the sole obligation of the quarantinist who guards the approaches to our seaboard and interior populations.

The hygiene of ships has hitherto received but a small measure of the consideration to which it is entitled. How to escape the perils of the sea has engaged so much of the attention of those who tempt them, and of those who build vessels for the transportation of passengers, that the sanitary condition of the vessel has been a secondary consideration. The *location of hospitals,* medical attendance and ventilation are the great essential deficiencies in the present construction and management of passenger steamships.

The passenger act, before referred to, affords protection to passengers against overcrowding, makes it obligatory to give them proper and sufficient food, air space, and in many respects promotes their comfort and safety.

The great number of immigrants now reaching our shores, in steamers crowded to their utmost capacity, the condition of many of these in respect to ventilation of steerages, and hospital arrangements, will convince the intelligent observer that an immense amount of latent contagion passes into the country and is spread far and wide among the population of our seaboard cities and populous interior communities. And this is true not only of the contagion of small-pox, but of those other contagions, viz.: Diphtheria and scarlatina, whose victims annually far out-number the victims of the disease first mentioned. By far the most dangerous to the public health, of the conditions referred to, is the improper location of the ship's hospital. In the year 1880, the hospitals of the transatlantic passenger steamers, with few exceptions, were located in rooms opening directly into the steerage, or gangway of the vessel. In a large majority of these steamers there was no ventilation except that which was afforded by the port lights and the door, and the former is not often allowed to be open for fear some of the ocean breezes will find access to the suffering sick. The door consequently affords the principal means for the admission of air to the hospital room, only to be inhaled by the immigrants in the steerage. The location of the hospital in the covered gangway, or waist of the ship is scarcely less objectionable; the germs of small-pox, typhus, scarlatina or diphtheria, that impregnate the atmosphere, are sown among the great number of people who frequent this portion of the ship, to germinate and reproduce the disease in crowded cities, along the great highways of travel, or in distant rural hamlets.

While municipal ordinances and State laws are invoked to secure an efficient quarantine, to prevent the propagation of these diseases, to the extent of forbidding public funerals of persons who die of infectious and contagious diseases, neither national nor State law provides for the isolation of hospitals for contagious diseases, or gives to the quarantine officer, who is expected to prevent the admission of such diseases into our ports, the power to compel such an arrangement of hospitals as will prevent the infection of the well.

The maritime quarantinist at the port of arrival is in a great measure powerless to prevent the introduction of those latent contagious and infectious diseases whose periods of incubation are as long as that of small-pox. To detain at quarantine passenger steamers until the incubative period of small-pox has expired, as is done with Havana steamers to prevent the introduction of yellow fever, would be to all intents and purposes an embargo on the passenger lines to this port.

The health authorities are, then, restricted to two principal means of prevention: first, in the case of small-pox, to early vaccination by ships' surgeons of all passengers insufficiently protected by it; and second, in the case of all contagious and infectious diseases that may develop *en route* to the port of destination, complete isolation of the sick from the well.

The importance of the latter can scarcely be estimated. A single case of latent contagion borne into the interior has not unfrequently resulted in an endemic or epidemic in which the loss of many lives has been the penalty. The introduction of small-pox into our towns, villages and interior cities is not often the result of inefficient inspection of the health authorities at our maritime quarantines, for it is a disease that the experienced physician quickly detects, but it is frequently due to the latent contagion contracted by the immigrant before embarkation, or from the contagion of cases on board ship which are improperly isolated. Other contagious diseases than small-pox and typhus fever, such as scarlatina, diphtheria and measles, are not quarantinable under the laws of this State. The Health Officer of the port of New York, not having the power to remove these cases, or punish the violation of regulations for their proper isolation, no adequate quarantine measure to secure proper isolation of the sick, or disinfection of the clothing, baggage and quarters infected by those non-quarantinable diseases can be effected. Proportionally as the power of the quarantinist is defective in those respects, the necessity is increased for such other sanitary conditions as *can* be secured through the authority delegated to him.

The location of hospitals on passenger steamships, so as to secure complete isolation, is one of the most important of these. When quarantinable diseases are put in hospitals so located as to make it reasonably certain that contagion has been disseminated among the well passengers, the Health Officer has the power, and it is his duty, to detain the exposed persons for observation, causing thereby detention of the vessel, and expense to the agents and owners of the steamship in the maintenance of those under observation.

Coercive influence to this extent has in repeated instances been exercised by the Health Officer at New York. The result has been, that the hospitals of all the new transatlantic passenger steamships are located on the upper deck, with ventilation from the upper portion of the hospital; while in a great number of the older steamers provision has been made for contagious hospitals in isolated portions of the ship. This matter is of so much importance to the health not only of all those who "go down to the sea in ships," but to the communities with which they soon again mingle, and among which they distribute the developed contagions whose germs are widely scattered from the hospitals on the steamer, that a careful examination of every passenger steamer which enters the port of New York has been made, with reference to the location of its hospitals.

On the "White Star" line all hospitals are isolated.

The "Cunard" and "State" lines have each one hospital not isolated; "Monarch" line, one hospital not isolated; "Williams & Guion", three hospitals not isolated; "Inman," two hospitals not isolated; "National," five hospitals not isolated; "Hamburg American Packet Company," six hospitals not isolated; "General Transatlantic Company," four hospitals not isolated; "North German Lloyd," six hospitals not isolated; "Anchor," six hospitals not isolated.

These constitute the principal and most popular of the steamship lines. It is significant that the *most* popular have the least number of objectionally located hospitals. The German lines have each fifteen regular steamers.

The time is not distant, it is hoped, when those who cross the sea will not only inquire if the vessel on which they propose to embark is staunch and swift, but whether its hospitals are located so as to protect passengers from the contagion of whatever disease may be developed on board.

Statutory provisions will strengthen the hands of the quarantinist, and contribute to the protection of the public health, by making it a misdemeanor to put sick of contagious and infectious diseases on passenger steamers in hospitals which are not properly isolated.

It is within a comparatively recent period that the sanitary condition of passenger ships, provision for hospitals, and medical attendance for passengers have received any attention. The conclusions of the committee of the august body appointed thirty years ago to investigate the great mortality among passengers from European ports to this country, referred to on a preceding page, are scarcely less surprising than the omission in the law of 1882 to provide for the proper isolation of hospitals for contagious diseases, an improved system of ventilation for the steerage, and adequate medical attendance.

The ratio of mortality during the past year among the passengers to this port has not been excessive when compared with the average mortality among the populations of our cities; but, as before stated, it must be taken into consideration that the vigorous and hopeful portions of foreign populations come to our shores; that they leave behind them the unsanitary condition and malarial influence which generally surround crowded communities, for the healthful invigorating atmosphere of the ocean, and ought to furnish a very exceptionally low rate of mortality.

If, then, the average mortality among steamship passengers equals that among populations in the countries from which they come, we must believe that it is greater than necessary.

The *immediate* effects of the unsanitary conditions which arise from the causes alluded to are seen when specific agencies such as typhus, small-pox, scarlatina, diphtheria and even that milder form of human contagion which is known as measles, are introduced among the passengers in a crowded steerage, as the following instances will illustrate.

May 27, 1882, the steamship *Nemesis* from Amsterdam arrived with twelve hundred and four persons in the steerage. Nine deaths had occurred on the passage; eight of these were from measles, six cases of the same disease and one of scarlatina were in the hospitals, which opened into the steerage, and the steerage itself was crowded and exceedingly filthy. Several deaths were reported to have occurred from the same disease subsequent to the landing of the passengers in New York. It is not, however, the immediate causes existing in unsanitary conditions and exposed hospital accommodations for those sick of contagious diseases on passenger steamers, so much as the remote causes which are productive of unfortunate results. The contagion is sown under circumstances which may distribute it with equal certainty among the crowded populations of our cities and the remotest hamlets of the country; and it germinates under conditions calculated to give rise to the most malignant type. Instances are not infrequent, where the contagion of these diseases which under the laws of this State the Health Officer of the port of New York is not authorized to remove from arriving vessels, has created much alarm from its fatality when developed in interior communities, as in a township in Niagara county during the past year.

The Atlantic ocean has come to be but a great ferry, whose waters between the shores of the old world and the port of New York alone are furrowed by one hundred and seventy-three regular passenger steamships.

The migration and transmigration of the populations of the old and new worlds over this vast highway is now an essential part of the prosperity and life of the people of both continents. Days are always consumed, and sometimes weeks in crossing the ocean, during which time, often one thousand to fifteen hundred human beings are compelled to breathe the crowd-poisoned air of the steerage, in which too frequently the germs of contagious diseases from imperfectly isolated hospitals are distributed.

Notwithstanding the effort for three years past to have the location of hospitals for contagious diseases so situated that a reasonable degree of isolation could be secured, the hospitals of a majority of the steamships are yet objectionably located.

The ventilation of passenger steamers has received some attention in the act whose provisions have been quoted. But no *system* has been prescribed; consequently with few exceptions the antiquated bell-ventilator is still in use. Whoever has once visited the steerage of a steamship on arrival at any of our ports, with such a congregated mass of humanity as is frequently found there, will require no argument to convince him, however ignorant he may be of sanitary matters, that the atmosphere is pernicious to the health of the occupants, and that the fortunate combination of ocean breezes, and rapid transit alone prevents a fearful mortality among the occupants of the steerage. Ablutions are rare indulgences with steerage passengers, and change of garments equally so; excretions of the skin saturate, and crowd-poisoned atmosphere impregnates wearing apparel and baggage, so that the disgusting smells of the steerage herald the approach of the immigrant and remain with him for days after he leaves the ship. The medical officers of steamships are really powerless to change this; the removal of the noxious gases, and the supply of sufficient fresh air by a judicious system of ventilation, would do more than any other one hygienic measure to preserve the health, and secure the happiness of passengers.

In the newest Atlantic steamers, upon which money has been spent without stint to make them models of marine architecture, of speed and ornamentation, the effective system of fan and tube ventilation is ignored. It is natural to suppose that where human life and health are concerned, sanitary mechanism would be employed to at least rival the progress which is merely conducive to material prosperity and comfort.

The steamship "*Lessing*," has adopted a system of ventilation by an "*aeropher*," that, it is believed, would be of great service in the displacement of the foul atmosphere from, and the introduction of fresh air into, the steerages of passenger steamships. The few that the writer has seen in operation were productive of excellent results. The mal-odorous atmosphere of the steerage was absent; the pure healthful air from the sea had taken its place. The *aeropher* in use on the Hamburg steamship "*Lessing*," it is claimed, removes one thousand cubic feet per minute. The diagram represents a maximum capacity for removing and introducing air of something more than fifteen hundred cubic feet per minute. This capacity depends of course on the diameter of the *aeropher* which varies from 400 to 800 = 10 to 20 inches.

The "Act to regulate the Carriage of Passengers by Sea" has undertaken to deal with the questions of over-crowding, food supply, separation of sexes, sleeping arrangements, ventilation and cleanliness, and has many commendable provisions, which are a long way in advance of regulations previously in force. But the ventilation required under the "act" must continue to be greatly inadequate to the necessities of passengers, under the old system of bell ventilators, when as frequently is the case the hatches are closed during rough or stormy weather.

Intimately associated with the hygiene of ships is the ability and character of the medical officer who has, or should have, the sole charge and responsibility of sanitary interests, of the lives and health of those on board.

The number of those who cross the ocean is rapidly increasing. The arrivals at the port of New York were 135,020 in 1879, and 455,844 in 1882. The responsibility of the ship's surgeon is increased proportionately to the number. It would be a source of much pleasure if it could be truthfully said that the standard of the medical service on ships had been raised to the ratio of the increased numbers who are dependent upon it. While it cannot be said to have retrograded, it has not advanced in any degree corresponding to the necessity for improvement or to the progress of the profession in other fields of labor. Several causes contribute to this result. Far be it from the desire of the writer that the few noble men and skillful physicians on the transatlantic passenger steamships should be denied the credit to which they are entitled. The inferiority of ships' surgeons, as a class, is owing to causes which the profession have hitherto been powerless to remove or correct.

The first of these causes is the meagre compensation given to ships' surgeons. In no case is it more than £10 per voyage, and more frequently less. On one of the steamers of a wealthy German line, the young surgeon of the ship was asked what pay he got. Hesitatingly he replied, "About one hundred and twenty marks" ($28.80). Apologetically he continued, "I come, you know, to see the country. I am going to Brazil a trip or two, and then I am going home to practice my profession." The ship of which that young man was surgeon had from 1,000 to 1.500 persons on board each arrival at New York, for several months in succession.

The first few days on board ship are days of suffering by a large majority of passengers, not unattended with serious results, in some instances, to the feeble and infirm. The experienced surgeon has usually sufficient to attend to with the sick during those early days of the voyage, without looking after the ventilation, cooking and cleanliness of the ship, which it is as much his duty to attend to as it would be of the surgeon of a regiment when "in the field." It is scarcely to be expected that those who own or control steamships will advance the price of medical services on shipboard while they are besieged with applications from doctors at the rates that are paid. The ship's surgeon is overworked, and has been since the great immigration commenced in the year 1880.

Social, political and economic conditions exist, and are likely to exist for years to come, which will bring to our shores the surplus population of the old world.

In addition to the sanitary supervision and medical attendance demanded of the surgeon in years past, he is now required to examine all immigrant passengers with reference to their protection from small-pox by vaccination, and to vaccinate all who are insufficiently protected. This duty is the most taxing ever imposed on the ship's surgeon; and there are now many who are conscientiously discharging this duty. One of the captains of a German steamer, on being complimented on the evidences of faithfulness of his surgeon, replied, "that man has lived in the steerage during the voyage." And all for one hundred and twenty marks, and the gratuities which the generosity of passengers might bestow. The compensation given the surgeons of passenger steamers is an invitation to the best talent to stay at home, and a bid for the inexperienced, incompetent and dissolute to seek the position. It is not long since one of the surgeons of an incoming steamer at the port of New York was so disabled by inebriety as to be incompetent to sign his name legibly to the usual affidavit, and when told by the Health Officer that if found again in the condition he was then, he would be likely to be quarantined, he was too stupid to understand the warning. The surgeon of one of the finest steamers that cross the Atlantic, and whose saloon list usually counts in the hundreds, on more than one occasion on arrival at the New York quarantine, has been too indisposed from the same cause to walk or talk naturally.

The German steamship "*Westphalia*" arrived at quarantine June 18, 1883, with eight hundred and forty-two passengers in the steerage; there had been three deaths at sea; one case of cholera morbus, then in the stage of collapse, had received no treatment, unless giving the patient some Rhine wine may be called treatment; and one case of typhus fever, in the eighth or tenth day of development, that had not been discovered by the ship's surgeon until the morning of arrival. His diagnosis of the case was "prickly heat." Fortunately the quarters of the patient were in a state-room opening into the gang-way instead of in the steerage, and the prostration of the patient had contributed in a considerable degree to secure isolation.

If the pay of surgeons were reasonable, men of the class referred to would be quickly displaced by men of greater ability, more experience and with regular habits. The health authorities at the ports of arrival in this country, as also in the interior, are not only bound in the interest of suffering immigrants, but of the vast population with whom the immigrants will soon mingle, and among whom they may distribute infectious and contagious diseases, whose latent germs were sown during the voyage, from the inefficiency or incapability of the medical officers of steamships, to "cry aloud and spare not," until a more efficient system of medical marine service is secured. The uncertain tenure of the office of surgeon of steamship is also a reason for this inefficiency of the service. His tenure of office should be as permanent as that of other officers, his rank as fixed, his responsibilities as defined, interference with his duties as unallowed as those of any officer of the ship. The medical service of the mercantile marine needs to be wholly reorganized, and a system adopted essentially different from that which exists.

A board composed of retired surgeons, or of medical gentlemen appointed by the board of trade, for English vessels, and for German and French vessels, by bodies of similar character, should constitute an examining board, whose duty it should be to inquire, with proper diligence, into the character, habits, and professional capacity of the candidate. The appointee of this board should be secure in his tenure of office except for cause, and as certain of his rank by seniority of appointment as other officers of the line. His duties should be specifically defined: the visitation of the steerage at least twice each day; inspection of food and its preparation; inspection with reference to the general sanitary condition of the ship; a record of the medical and surgical cases occurring on board during the voyage, and the treatment of the same, should be required to be made to the board of trade or to the medical board. Full authority in all matters pertaining to the sanitary condition of the vessel, the isolation of the sick, and their management, when it shall not interfere with the discipline of the ship, should be guaranteed to the medical officers. Surgeons having charge of more than five hundred passengers should have an intelligent medical assistant or steward, who is subject to, and whose sole duty it should be to assist the chief medical officer of the ship. If it was made the duty of such an assistant to see that all sick passengers who were able attended the "surgeon's call" at a designated hour of each day, and in the interval to exercise proper diligence in discovering those who became sick, and in dispensing the treatment ordered by the surgeon, there would be fewer cases of contagious disease to develop and scatter their germs among the occupants of the steerage, much more comfort and safety for the immigrant passengers, and infinite relief to the over-worked and ill-paid surgeon. The medical officer thus appointed should be required to report to the central authority at every "round trip" of the steamer of which he is the medical officer, as to the deaths, cases of sickness, their treatment, and the sanitary conditions of the vessel. These reports, if made by intelligent and faithful officers, would be valuable additions to the medical literature of the day. But to insure such reports as will expose improper interference with their authority or duties, and secure faithful reports of the diseases on ship-board, their causes, suggestions as to remedial measures, and of the sanitary conditions of the vessel in their charge, protection must be assured them in the discharge of this important and responsible duty, and in case of officious or vindictive interference or complaint, an impartial, disinterested board should be provided to which they can answer.

The abject submission to ignorant, capricious or ill-tempered masters of vessels, to which medical officers are frequently compelled, is subversive of important sanitary interests. This is well illustrated in the case of a steamer that arrived at the port of New York from Rio

Janeiro a few months ago. One case of small-pox had developed on the voyage, which was promptly isolated by the surgeon ; a few days subsequent to the isolation of this patient, two of the crew were taken sick with symptoms which seemed to the surgeon suspicious of small-pox. A day or two of observation served to convince the doctor that he was mistaken in his diagnosis of the last two cases isolated. This fact coming to the knowledge of the captain, the men were imperatively ordered to duty, notwithstanding the protests of the surgeon, without disinfection or change of their clothing. The consequence was that a portion of the crew believed to be susceptible of the disease was held in quarantine. The result justified the measure, as three cases of small-pox were soon developed. The effort made by the Health Officer to convince the captain, with the aid of the subsequent results, that though he might know more of navigation than the doctor, he knew less about small-pox, it is presumed was successful.

If the present system of remuneration of medical officers of the mercantile marine is to continue, few men of the desired intelligence, experience and ability will in the future, as in the past, be found in it. Even as a measure of economy it would be better for the principals of the transatlantic passenger lines to this country, to give their medical officers assurance of permanent employment at fairly remunerative wages, establish a system whereby promotion for faithful and intelligent services would be secured, and provision for retirement upon half pay, when age, ill-health, or misfortune, compelled them to withdraw from the service. In December, 1880, a steamship arrived at the New York quarantine with seven hundred and forty-nine steerage passengers. Two cases of small-pox were found among the steerage passengers. One of the cases was of the confluent type and had been allowed to remain in an open bunk, adjoining a space along which the other passengers passed without restriction. The other case was in the sixth day of the development of the eruption, and was not discovered until the Health Officer examined the passengers at quarantine. All the steerage passengers were removed to the quarantine of observation, and held at the expense of the consignees of the vessel until the results of the exposure were ascertained. May, 1881, eight hundred and nineteen steerage passengers were taken from one of the steamships from Glasgow by the Health Officer on arrival at quarantine, and kept under observation at Hoffman's Island several days, on account of six cases of small-pox discovered by him. The most seriously sick case was diagnosed by the ship's surgeon as chicken-pox, the other cases the ship's surgeon had not seen. The agents of these steamships truthfully declared, no doubt, that the detention of the passengers "wiped out all the margin." How many lives were imperiled by the neglect and ignorance of these medical officers was not a subject of inquiry, if it was of concern.

Respectfully submitted,

WM. M. SMITH, M. D.,
Chairman of Committee,
Health Officer of the Port of New York.

[F.]

REPORT OF THE STANDING COMMITTEE ON DRAINAGE, SEWERAGE AND TOPOGRAPHY

The duties assigned to this committee are amongst the most important that the local boards of health have to deal with. They often relate to more than one community or jurisdiction of a single local board, because the drainage questions, the extent of miasmatic grounds and epidemic areas not infrequently concern contiguous towns and adjacent counties. A large proportion of the subjects which the people bring to the attention of the Governor for his interposition through the State Board of Health are, under rules of the Board, referred to this committee.

Experience during the past two and a half years has shown that the people are becoming intelligently concerned about those sources of disease and danger which arise from miasmatic conditions and filthy outflowing, accused by health officers and physicians as the most preventable sources of sickness and untimely mortality.

In the Board's previous reports numerous instances have been briefly presented for the purpose of conveying a correct idea of the importance of these sources of danger to health and life. In the present report the committee begs leave to submit a series of consecutive statements, which correctly set forth what the State is now doing through this Board, and by the Governor's direction to aid in discovering, overcoming and preventing evils which, in most instances, communities that suffer them would not, without such aid and authority, successfully master.

Perhaps nothing will be more obvious to the reader, as certainly nothing is now better understood by this Board, than that the few laws in this State which relate to drainage, sewerage, water-supplies, and the protection of inhabitants in villages and cities, against the defilement of the ground, the atmosphere, and even of the drinking water, from filthy outflowings and other nuisances, are still vague and insufficient. It is believed that the statements here annexed relating to the chief questions which have been referred to the Board for its investigation and judgment will impressively illustrate the nature of all these sanitary problems in these respects, and also the importance of the drainage and sanitary protection of extensive areas of unhealthfulness in rural districts; for nothing, perhaps, could be more instructive than the experience of the Board and of the districts in which it has secured drainage, by aid of the State's interposition.

This committee again submits to the Board, that the conclusions of experience contained in a special report made by its chairman, a year ago, concerning the leading sanitary question connected with the sewerage of large villages and interior or small cities, as far as relates to the economy and sanitary advantages of the "separate system" of sewerage, should be maintained on principle by this Board. Civilization demands that the modern conveniences which place dwellings in cities and villages in a sanitarily safe relation to the public sewers shall, under no possible circumstances, become changed to a perilous and pestilent connection with filth and foul air.

This committee has, during the past year, continued to advise the adoption of all known methods of such sanitary security, and chief among them is the separate daily "flushing" sewer system.

GENERAL SUMMARY OF THE INVESTIGATIONS AND LABORS OF THE COMMITTEE ON DRAINAGE, SEWERAGE AND TOPOGRAPHY DURING THE YEAR.

During the past year, a large number of complaints relating to many different subjects have been investigated by the committee, and a brief account of the results of the more important cases is herewith appended.

The complaints and petitions for aid and counsel from local boards of health can generally be classified in some one of the following four principal divisions, viz.:

I. *Nuisances caused by abandoned canals.*
II. *Obstructed natural and artificial water-courses.*
III. *Defiled natural and artificial water-courses.*
IV. *Sewerage and drainage of towns and villages.*

From this general classification, it will be seen that the questions referred to the committee have a broad scope, and are often involved with a recognition of the defects of the laws of the State in regard to protecting properly the life and health of citizens in many cases where the local authorities are practically powerless to remedy existing evils from which a single community, or a continuous series of communities, suffer in a greater or lesser degree. The attention of the Board is therefore again called to the importance of securing such general legislation as will result in affording reasonably prompt relief from suffering in all cases where united action of the local authorities of adjacent districts becomes necessary. The mutual and reciprocal duties of individuals and corporations or communities, in regard to the conservation of the public health, should also be more sharply defined by law, so that a demand for the abatement of a public nuisance will receive due and speedy attention, instead of being associated with vexatious, and often intolerable delays. In illustration of this we may refer to the case of a village which may be in urgent need of sewerage, or some other necessary sanitary improvement, but which it cannot obtain for the reason that its articles of incorporation do not provide for the consideration or payment of such improvement; also to the case where the aggressor may chance to be a powerful corporation or association of certain interests, which by neglecting its plain duty toward one portion of the public, causes widespread suffering and annoyance over a relatively large extent of territory whose sanitary supervision may be vested in a number of independent local boards of health. Numerous other instances might further be cited in support of the general statement that the laws relating to the maintenance and due preservation of the public health should be carefully revised from time to time, and adapted to the results and necessities of our modern civilization, and to the new industries and processes that are constantly being developed therefrom; but it will perhaps suffice to point out such needed alterations or modifications in the laws, whilst referring briefly to the series of special problems brought to our notice and submitted in the following statements in the order indicated above.

I. Abandoned Canal Nuisances and Miasmatic Disease in Livingston, Chemung, Schuyler, Monroe and Oneida Counties.

Extended reference to the nuisances resulting from the abandonment of the Genesee Valley canal in Livingston county, and of the Chemung canal in Schuyler and Chemung counties, has already been made in the second annual report of the Board; yet as the experience gained in the sanitary drainage of long stretches of abandoned canal is highly instructive, both in demonstrating the coördination of malarial disease with want of proper drainage, and also in exhibiting some of the legal difficulties encountered in the practical execution of drainage operations extending over considerable territory and under the jurisdiction of a number of independent local boards of health, this committee, therefore, submits the appended papers from the engineer employed to aid the committee in the discharge of its duties.

(*a.*) *Abandoned Genesee Valley canal drainage.* — In the case of the Genesee Valley canal, it may here be mentioned that its bank and prism came, by legally authorized sale, into the possession and ownership, for railroad purposes, of a corporation known as the Genesee Valley Canal Railroad Company; and that, in consequence of the neglect of said company to remove the stagnant water which had accumulated gradually in the canal prism, the section of said canal extending southerly from Scottsville, in the county of Monroe, to Kishaqua creek, or the Shaker community of Sonyea, a distance of twenty-nine miles, soon became miasmatic, and was duly pronounced a public nuisance. The local boards of health found themselves unable to obtain relief from the railroad company and finally appealed to the Governor, who, after a careful investigation and report by the Board, issued on November 1, 1881, the order printed on pages 295 and 296 of the second annual report, and by which said railroad company was required to drain the canal prism between the limits mentioned.

The condition of the canal prism at this time, together with a series of suggestions for effecting quickly and economically its drainage, will be found fully described in the following condensed report of the engineer, made on the 8th of August, 1881.

Report on the Condition of the Abandoned Genesee Valley Canal from Scottsville to Sonyea.

By E. Kuichling, C. E.

Rochester, *August* 8, 1881.

To the State Board of Health:

On the 14th ult. the undersigned received instructions from your Board to examine the condition of the abandoned Genesee Valley canal, from the village of Scottsville, in Monroe county, to the Shaker community of Sonyea, in Livingston county, and to ascertain the location and methods of abatement of certain nuisances arising from stagnant water in the bed of said canal.

The instructions received have reference to sanitary conditions essentially, and not to elaborate questions of engineering relating to the restoration of the original topographical characteristics of the country through which this portion of the abandoned canal was built, or, in other words, the object of these instructions was to obtain suggestions and plans, which should be simple, efficient and comparatively inexpensive, for permanently removing from the bed of said canal such stagnant and offensive waters as might be there found and thus improving the public health in that district.

In dealing with this question we have to notice that a corporation known as the "Genesee Valley Canal Railroad Company" is in possession of the main line of the abandoned canal from Rochester to Olean, by virtue of lawful purchase of the lands, easements and rights formerly vested in the State of New York. That portion of the canal, however, extending from the Shaker settlement of Sonyea to the village of Dansville, and known as the "Dansville Branch," is not included in the property of said company, but will revert in due time to the original owners of the land. Another element should also be considered, which arises from the sale of the structures upon the line of the canal to other parties. Owing to want of time and to the difficulty of obtaining accurately and definitely the desired information with reference to the necessities, designs and intentions of the various parties especially interested in the work of drainage, the undersigned asks leave to submit his views and methods for carrying out said work upon the assumption that neither the railway company, nor the landowners, nor the purchasers of the mechanical structures on the line of the canal, will by their operations materially alter the existing conditions. It is, therefore, assumed in the following that certain restrictions have been imposed upon the several parties aforesaid by terms of the sale and reversion, as otherwise an interminable series of complications might easily arise from the discharge of surface drainage through other channels than those which originally received it, and from the washing away of the embankments, etc.

The technical details, accordingly, of the general plans and methods of draining the canal herewith submitted may require revision and modification if the above-mentioned parties design to change materially the present form and condition of the canal and its structures, particularly the locks and culverts, or if they should prefer, from private considerations, to undertake a more elaborate and expensive system of drainage at any point.

In the examination of the section of the abandoned canal described above, efforts were made to consult with the local health authorities in each township, and to learn to what extent the public health had been affected by the stagnant water. The complaints refer in particular only to a few localities, viz.: 1st, the stretch of canal from Piffardinia to Worcester's basin, a length of about two and one-fourth miles, in which water is retained by dams apparently for the purpose of watering cattle upon the Wadsworth farm; 2d, the portion of the canal from Lock No. 7 to Lock No. 8, in the town of Leicester; and 3d, the section from the eastern or southern corporation limit of Mt. Morris to the Shaker settlement. In all of these places the complaints seem to be well-founded, as the water upon the bed of the canal is stagnant and covered with algae, whereby it is rendered offensive to the sight, and at times also to the sense of smell. By the physicians, such localities are pronounced decidedly unhealthy and productive of malaria and fevers.

In order to present a comprehensive statement of the condition of the canal from Scottsville to Sonyea, the undersigned has prepared the following table, giving the distances between the various points and the relative lengths of the wet and dry sections on each level:

TABLE showing relative lengths of Genesee Valley Canal containing stagnant water between Scottsville and Sonyea.

SECTION.	Total Length. Miles.	Length containing water. Miles.	Length comparatively dry. Miles.	Remarks.
From Lock No. 3 to Lock No. 4...	8.64	7.40	1.24	Scottsville to Canawaugus.
From Lock No. 4 to Lock No. 5...	2 10	0.10	2.00	Canawaugus to Sackett's basin.
From Lock No. 5 to Lock No. 6...	5.10	3.00	2.10	Sackett's basin, south.
From Lock No. 6 to Lock No. 7..	8.16	3.16	5.00	Piffardinia and Cuylerville level.
From Lock No. 7 to Lock No. 8...	1.00	1.00	0.00	Genesee river, north.
From Mt. Morris to Sonyea....... ..	4.00	3.00	1.00	Genesee river to Kishaqua creek.
Totals...............	29.00	17.66	11.34	Miles.

The conclusions to be deduced from the foregoing table belong rather to physicians than to an engineer; and the undersigned will, therefore, restrict his statements to the general plan proposed for removing the stagnant water from the bed of the abandoned canal.

From Scottsville to Mt. Morris the canal is built on the western side of the valley of the Genesee river, winding generally around the hillsides, and approaching quite often near to the river's shore. The same brief description will also suffice for the section from Mt. Morris to Sonyea. The towing-path of the canal is mostly an embankment formed from the excavation of the channel or prism in the slopes of the hills to the west and south; and hence many small lateral gullies or ravines on the hill-sides, having comparatively steep inclinations and limited drainage-areas, were received directly into the canal in order to save the expense of constructing culverts. Larger and deeper lateral valleys tributary to the Genesee, on the other hand, are crossed by embankments of more or less magnitude, and the natural water-courses receiving the drainage of these valleys have been carried under the embankments through suitable culverts. The interception of the former, or small gullies and ravines by the canal, implies the reception during storms of considerable surface drainage water, which originally flowed down the hill-sides and across the lower lands, either into the river or into some more conveniently located tributary. By the construction of the towing-path embankment, many of these smaller water-courses in the lands below ceased to perform their functions, and have gradually become more or less obliterated by the combined action of the elements and the processes of agriculture; while on the opposite side of the canal, the drainage waters have, since the abandonment, continued to flow into the prism, thereby forming, in the original depressions, basins or pools which are frequently of considerable depth and extent. The drainage of these ponds or basins in the bottom of the canal becomes a vexatious matter where the original outlet has been wholly or partially obliterated, and its site is now occupied by cultivated ground, for complicated legal questions are liable to arise if an attempt were made, after the lapse of so many years since the construction of the canal, to trace out and restore the original outlet. Cases also occur where an originally large water-course of this kind has gradually been reduced to a small drainage ditch across the field or meadow; and if the concentrated drainage brought down from the ravine or gully during a severe storm were now to be discharged into such a ditch, an overflow, disastrous to any crop planted or growing in such a field, would probably ensue. In cases of this kind, where no other practicable solution of the difficulty can be devised, the undersigned would recommend that such a pond be allowed to discharge its present contents and future accumulations slowly through a contracted sluice or pipe.*

Before, however, undertaking a work of this nature, competent legal advice should first be obtained in order to define sharply what rights of drainage the railroad company possesses.

Fortunately the greater portion of the stagnant water in the canal can easily be removed by making use of the numerous culverts, aqueducts and spill-ways along its course, most of which are in close relation to existing natural water-courses of considerable size. Prior to the construction of the canal, these latter received in most cases the drainage that is now intercepted, and accordingly no valid objection to the return of such drainage into its original outlet can be raised.

The general plan herewith recommended by the undersigned for disposing effectually and economically of such water as collects in the canal under the present conditions, and becomes stagnant therein, may briefly be stated as follows, which is taken from the former report made on July 22, 1881, and reproduced here for convenience.

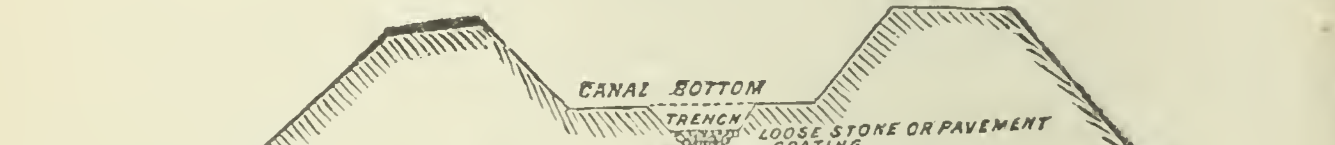
To thoroughly break up, by ploughing, a narrow strip of the thin and relatively impervious layer of accumulated silt, or clayey lining material originally deposited upon the canal bottom for rendering it water-tight; and then, by means of horse-scrapers, to remove the loosened impervious material to the banks or sides, or to any convenient depressions or hollows in the prism. A shallow trench, about three (3) feet wide, can thus be formed rapidly in the bed of the canal and access obtained to the porous strata below, into which large quantities of water will readily pass by simple absorption. But to render the work of drainage still more effectual, these trenches should be cut with a slight, but uniform grade from a point or summit about midway between two consecutive places of discharge. For these places of discharge, natural water-courses of suitable magnitude should be chosen, which can always be reached by opening a culvert, or by lowering the abutments of aqueducts or the breast-walls and aprons of spill-ways. Where the distance between two such points is greater than desirable, or when the cost of trenching and grading would exceed that of a cut through the towing path bank into a ditch or old water-course of proper size, then the latter expedient should be adopted. It will thus be seen that by the general plan indicated in the foregoing, large volumes of storm water will be conveyed along the bottom of the canal into natural and open water-courses, while small quantities of rain or melted snow will be disposed of quickly by being absorbed into the permeable earth exposed by the trenches.

---

*The details of this method will be found fully explained and illustrated on pages 289 and 290 of the second annual report of this Board.

In opening a culvert, care must be taken to prevent the opening from becoming choked up by the earth and floating bodies which may be carried along by the current of water; and in case that the culvert is under a high embankment, as in Fig. 1, special attention must be paid to obviate a destructive washing away of the whole embankment through the opening into the culvert. To reach such a culvert, the earth should be excavated vertically downward to the masonry, and an opening made through the latter. The culvert and the graded trench in the canal bottom are then to be connected by a strong closed channel or pipe, whose lower end rests upon the masonry and is joined water-tight thereto by cement mortar, while its top is provided with a suitable grating and a collar wall of masonry. The excavated earth should be replaced around the pipe as compactly and tightly as possible by

FIG. 1.



pounding or puddling, in order to prevent the entrance of water in appreciable quantities into the body of the embankment; and to prevent scour on the bottom and sides of the trench, these surfaces should be paved with stone for a short distance in all directions. In all cases, moreover, the condition of the culvert and its foundations must first be thoroughly examined before it shall be subjected to the action of large volumes of water. Cast-iron pipe is the best material for this purpose, as it is not affected deleteriously by extreme changes of temperature, and is easily manipulated in such excavations. Its diameter should be proportioned in accordance with the amount of water to be discharged in a given period of time.

Fig 2.

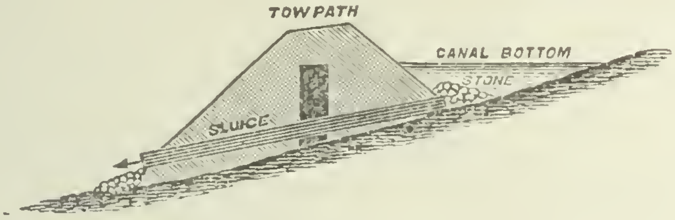
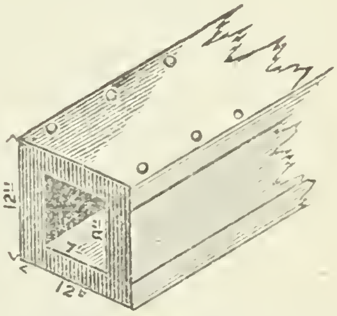


Fig. 3.



Similar precautions are necessary where the abutments of aqueducts or the breast walls of spill-ways and waste-weirs are to be lowered; and also where cuttings through the towing-path bank are unavoidable. When such a cutting is made for the drainage of a pond or pool formed by the construction of the towing-path bank across a gully or ravine, and when a suitable outlet therefor cannot be obtained without damage to the adjoining fields, but the only available outlet is a small drainage ditch or water-course which would be entirely inadequate to receive and discharge the drainage from the gully and the canal for some distance in each direction, then the undersigned would recommend the use of a tight pipe or sluice laid through the bank as indicated in Fig. 2, and the discharge of this sluice to be regulated by depositing a quantity of loose stone, or stone and brush, over and around its inlet at the foot of the bank. A cheap and excellent device for such a sluice or pipe is a rectangular tube formed of sound white oak plank well spiked together, the joints in the plank being properly broken or distributed. The plank to be two inches or two and a half inches thick, and of such width as to give an interior opening of from seven to eight inches square as shown in Fig. 3. A tube or pipe of this kind is quickly made and put into place; and when it has been well spiked together, it will be adapted to conveying water under pressure, besides being flexible enough to yield, without injury, to slight displacements by frost or settlement Cast or wrought iron pipes, properly jointed, however, would be better; but the wooden box is, in the opinion of the undersigned, preferable to any kind of draining tile for such purposes. The earth excavated for such a cutting through the towing-path bank, must necessarily be replaced and compacted in the best manner, as the pond is liable to fill up during a heavy rain, thus subjecting the embankment to severe strains and the danger of being washed away. On the other hand, where a suitable water-course is available, pools of the kind referred to above may be drained directly by an open cut through the bank. Having thus indicated in general terms the methods and precautions necessary for the drainage of the section of the canal under consideration, the undersigned will now submit a short statement relative to the condition of the abandoned canal from Scottsville to Sonyea.

At Scottsville, on the southern side of Allen's creek, the canal is in embankment, the material for which appears to have been derived from the adjacent low ground. This latter is now marshy and subject to overflow from the creek during high floods; but in ordinary seasons it may be drained by suitable ditches cut through the swamp into Allen's creek. The most effective remedy, however, would be to refill the excavated area to its original level.

About one and one-fourth miles south of Scottsville, stagnant water in appreciable quantity begins to be found upon the canal's bed, and continues thence without interruption to the foot of Lock No. 4, a distance of seven and four-tenths miles. This water is due to a number of rivulets intercepted by the canal, and its level is maintained by escaping through a spill-way and a cut through the berme bank.

From Lock No. 4 to Lock No. 5, a distance of about two and one-tenth miles, the canal bottom is marshy only in a few places, generally where an embankment has slightly settled and left the bottom lower than in places where excavations were made.

Following this is the level including the villages of Piffardinia and Cuylerville. The canal is quite dry from Lock No. 5 to a point about one-third mile south of Piffardinia, where a dam has been built across the bottom to retain the water. From this dam to Worcester's basin, near Cuylerville, stagnant water, varying in depth from one to one and one-half feet, is found continuously for the entire distance of two and one-fourth miles. Worcester's basin is a large pond, formed by the construction of the towing path bank across a gully, and has a water surface of about one and one-fourth acres, with considerable depth. The water in this section is mainly storm drainage, supplemented by the comparatively small quantity delivered by means of a wind-mill from the river through a wrought-iron pipe, several hundred feet long, and one and one-half inches in diameter. The adjacent lands are owned by Messrs. Chas. F. Wadsworth, R. M. Osburn, Martin Hayes, Isaac Budlong, and Mrs. Craig Wadsworth. Of this portion of the canal, particular complaint has been made by residents of Piffardinia on the north, and by Anthony M. Worcester on the south. An attempt is made to maintain a current in the water; but owing to the small influx, this can not be termed successful. From Worcester's basin southerly through Cuylerville to Little Beard's creek, the canal bottom is comparatively dry; while the portion from said creek to Lock No. 6 is quite wet, caused by the diversion of Samp's creek, above said lock, into the lower level. The entire length of this level is about five and one-tenth miles, of which three miles contain water.

The following level is short, and has water upon the bottom for the entire distance. Cases of ague are reported in the family occupying the lock-tender's dwelling.

At a short distance beyond, the canal enters the Genesee river, whose waters are kept out by a strong dam across the canal prism.

On the east side of the river, in the corporation limits of the village of Mt. Morris, the local health authorities have already taken effective measures to remove the water from the abandoned canal; but from the south-eastern boundary of said village onward, water is found in the bed of the canal almost continuously to Kishaqua creek, a distance of nearly four miles. At Sonyea, a short distance north-west of this creek, a portion of the drainage from the Shakers' community is received into the canal.

As has already been stated, the drainage of this part of the abandoned canal described above can readily be accomplished, and without very great expense, provided that in this undertaking no heed be paid to the necessities or intentions of the railway company and the purchasers of the mechanical structures along the line. Proceeding upon this assumption, the undersigned will now submit a list of the items of work which he considers advisable to perform, between Scottsville and Sonyea, exclusively for the purpose of draining the bed of the canal and the pools or ponds found therein. Some of these items may perhaps be modified or omitted entirely from the list, after more careful deliberation and study of the different localities; while others, again, will undergo alteration at the hands of the engineers of the railway company, with whose necessities the undersigned has had no opportunity to become acquainted. In order, however, to secure attention to the subject from the several parties vitally interested, the following list is herewith submitted. * * *

Respectfully submitted,
EMIL KUICHLING,
Civil Engineer.

The order of the Governor requiring the Genesee Valley Canal Railroad Company to properly drain the abandoned prism was duly served upon the president of said corporation, and the subject was promised prompt attention; but considerable difficulty was experienced in obtaining from the railroad officials a substantial compliance with the terms of the order on account of the actual occurrence of some of the legal obstacles foreshadowed in the report of the engineer submitted above. Several examinations of the line of canal were made during the present and past year, and but little progress in the work of permanent sanitary drainage could be reported; yet by persistent efforts on the part of both the Town and State Boards of Health, the officers of the company were at length induced to continue the drainage operations which had been somewhat retarded by lawsuits, and late in the autumn the greater part of the work contemplated by the Governor's order was reported to have been accomplished, as will be seen from the following letter of Mr. Robert Bell, chief engineer of the railroad company, to Col. Ensign Bennett, general manager:

GENESEE VALLEY CANAL RAILROAD COMPANY,
CHIEF ENGINEER'S OFFICE,
MOUNT MORRIS, N. Y., *October* 6, 1882.

Col. ENSIGN BENNETT, *General Manager :*

DEAR SIR — In accordance with your request, herewith I give a statement of progress made in draining the abandoned Genesee Valley canal.

Between Scottsville and Mt. Morris, cuts have been made through the tow-path and berme banks at points wherever sufficient fall could be had, and all stagnant water has been drained. There remain a few places which will have to be filled with earth, as sufficient fall for drainage purposes is not obtainable.

At Mt. Morris we have filled up some holes of stagnant water with fresh sand, thus doing away with the nuisance. After the completion of our switch track we shall put in a sluiceway to carry the town sewerage directly across our tracks instead of running it down to the old prism.

At the brewery we have put in a wooden flume in order to maintain a ditch, and a force is now engaged in digging a ditch to carry the brewery drainage to Buck Run.

Between the brewery and Sonyea, all stagnant water has been thoroughly drained by pipes through the tow-path.

At Tuscarora and above, a force is now engaged in ditching and making openings ; and such points as were designated as needing drainage will be well drained within a few days.

(Signed) Very truly,
R. BELL, *Chief Engineer.*

The inspections of the drainage works were made prior to the date of Mr. Bell's letter, and while many of the operations were still in early stages of progress, and since that time the Board's attention was called to other nuisances which demanded immediate notice.

With regard to the improvement in the general health of the territory adjoining the line of the former canal, and which had previously been quite seriously affected by the presence of large areas of stagnant water, it may incidentally be remarked that the most favorable reports were made to this Board at different times during the year by town officers and residents of all localities wherever drainage works were executed.

(*b.*) *Dansville Branch of Genesee Valley Canal drainage.*— On the Dansville branch of the abandoned Genesee Valley canal, which extends about twelve miles south-easterly from Kishaqua creek, or Sonyea, to Dansville, in Livingston county, and which was not included in the purchase of the railroad company, considerable work in the matter of sanitary drainage has also been performed during the past season by the Superintendent of Public Works in completing the operations commenced in July, 1881, and referred to on pages 285–293 of the second annual report. An account of the condition of the prism last spring, as well as of the work then remaining to be performed by the State authorities, will be found in the following report of the engineer employed by the Board:

ROCHESTER, N. Y., *June* 3, 1882.

To the Chairman of Committee on Drainage, Sewerage and Topography, New York State Board of Health:

DEAR SIR — In accordance with instructions received a few days ago from your Board to examine the drainage works executed last summer upon the line of the "Dansville Branch" of the abandoned Genesee Valley canal, and to report what further work remains to be performed thereon in order to complete its sanitary drainage, the undersigned begs leave to state that on Wednesday, May 31, he carefully examined the condition of this section of said canal, from Sonyea to Dansville, in company with Mr. Thomas Evershed, division engineer of the western division of the New York State canals, and Dr. L. J. Ames, of Mt. Morris, N. Y., and would now respectfully submit herewith the following report:

The "Dansville Branch" of the abandoned Genesee Valley canal begins a short distance easterly of Kishaqua creek at the Shaker community of Sonyea, and winds for the greater portion of its length along the foot of the hill-sides in a south-easterly direction to the village of Dansville, in Livingston county. As the canal intercepts most of the surface drainage from the hills, provision for suitably disposing of the water conveyed directly into the prism of the canal through many small brooks, rills and gullies, became necessary upon its abandonment in order to prevent this water not only from becoming stagnant and thus a source of malaria, but also from escaping at points where it might cause much damage when delivered in large quantity. The State accordingly undertook the matter of draining the abandoned channel and caused considerable work in this direction to be performed last summer in accordance with certain general specifications submitted by me to your Board. The whole of the work contemplated would then have been completed, but for the refusal of a few individuals owning adjacent lowlands to permit the passage through or over such lands of any surface drainage which did not originally flow across them prior to the construction of the canal, and consequently the drainage of these sections has been deferred.

It should be remarked that in the comparatively level flats the original channels of many of the smaller natural water-courses now intercepted by the canal were either originally very indefinite or else were soon totally obliterated by the processes of agriculture, so that the course formerly taken by the drainage water at these places is now practically only a matter of tradition, and hence also of dispute, especially where different individuals own the land on opposite sides of the canal. To accomplish the drainage in a just and satisfactory manner, without giving rise to injunctions or other legal difficulties instituted by adjacent land-owners who may deem themselves aggrieved if any work is performed without their full consent, will therefore require the expenditure of considerable time on the part of some agent of the State, particularly since several of these land-owners reside in other parts of the country. All of the owners, however, whom we could find and interrogate manifested a strong disposition to facilitate the work of drainage by conceding voluntarily the privilege of discharging limited quantities of water into such ditches as are now in existence across their lands where no well-defined original water-courses can be discovered, and in these cases it might perhaps be prudent to cause proper agreements to be duly executed and recorded in order to avoid future litigation.

In the general plan for the drainage of the canal, submitted last year, it was recommended that all culverts be opened and the breast-walls of all waste-weirs, locks and aqueducts lowered, after which ditches were to be cut in the bottom of the canal and suitably graded from intermediate summits to the points of discharge thus obtained. All of these structures, however, were sold last year by the canal authorities, mainly to parties interested in several lines of railway in process of construction through this region, and who purchased the said structures for the sake of obtaining the stone of which they had been built. Soon after the drainage of the canal was suspended, the work of removing the masonry was commenced and energetically prosecuted, so that now, with merely a few insignificant exceptions, only a series of excavations of more or less magnitude remain to indicate the places where culverts, aqueducts, waste-weirs, locks and bridges had formerly stood.

The tearing out and removal of this stone-work caused considerable injury to the new drainage ditches which had just been excavated in the canal bottom as in a number of places they are either obstructed by masses of waste material or else partially obliterated by the action of the wagons and horses employed to transport the stones along the canal to some convenient place for reaching the highway. In other localities bars of silt have been washed into the bottom from the numerous intercepted gullies and brooks; and small earthen dams are furthermore to be seen at frequent intervals which adjacent land-owners have built for the purpose of retaining water for cattle or for cutting ice. These dams have, in some instances, caused the storm-water collected by the canal from the hill-sides to flow in a direction opposite to that which had been planned in laying out the ditches; and as each land-owner appears to have acted upon the principle of self-preservation, other dams were speedily constructed, thus leading to the formation of a series of shallow pools in the canal bottom, which will become dry only by the slow processes of evaporation and absorption.

But in spite of these obstructions to the drainage ditches, much good has obviously been accomplished by the work done last year, since on the date of our inspection, two or three days after a rain-storm of unusual severity and duration, the canal bottom was comparatively dry over an aggregate length of about eight miles, which had formerly retained in midsummer a depth of from one to two feet of foul, stagnant water. The principal work yet to be performed in order to complete the sanitary drainage of the abandoned canal is upon the section from the hamlet of Keyserville easterly to Rock Spring creek, a distance of about two miles. In this section a large number of small brooks, rivulets and gullies are intercepted by the canal, but no original water-courses of proper magnitude to receive large volumes of storm-water are to be found traversing the low ground adjacent. As the latter is drained only by a series of ordinary ditches, it is obvious that until the land-owners unite in the construction of a suitable channel or channels for the quick removal of the storm drainage from the hill-sides, the canal excavation should be retained in this locality as a storage reservoir, from which the water accumulating during a storm may be drained away slowly into the land ditches already mentioned by means of suitable appliances. The remainder of the work is extremely simple in character and will be found described with sufficient minuteness in the following pages.

Having thus referred in general terms to the circumstances attending the drainage of the canal, I will now proceed with a detailed description of its present condition from Sonyea to Dansville, indicating at each point what work should, in my opinion, yet be done.

1. From Kishaqua creek easterly through a portion of the lands owned by the Shaker community and also through the lands owned by Mrs. Geo. H. Starr, the canal bottom was ditched last year, but has since become partially filled in by silt. A small dam has also been built by the Shakers close to Kishaqua creek, whereby the flow of the water in the ditch is obstructed, and in time of freshets, it is reported that much water is thereby made to flow easterly instead of toward its natural outfall into said creek, thus causing a grievance to the adjoining owners. This dam should be removed and the ditch deepened from the creek to the second gully easterly, so as to throw the drainage westerly into Kishaqua creek.

2. Upon the farm of Mrs. Geo. H. Starr, a wooden culvert over a small water-course was opened, but as the timber of which said culvert was constructed is badly decayed and the water-way of the culvert considerably clogged, I would recommend that it be wholly or partially removed, and that the drainage ditches in the canal bottom be graded somewhat deeper on each side thereof to adjacent summits. At the barnyard on this farm the ditch has been obliterated by cattle and a small dam constructed to retain the water. The improvement of the drainage here should properly be performed by the owner.

3. Close to the line between the lands of Mrs. Starr and Frank Fitzhugh of Bay City, Mich., there is another old wooden culvert which was opened last year, but has since been closed up by Mr. Geo. W. Moore, lessee of the Fitzhugh farm, on the ground that more than a just amount of drainage was discharged from the west into this culvert and that the water seriously damaged certain lowlands leased by him. He expresses his willingness, however, to reopen this culvert as soon as he is assured that his neighbors to the west will not send their drainage down upon his lands. As some water was standing in the ditches cut into the canal bottom on both sides of the culvert, I cannot determine definitely whether they will require further grading. The work necessary here should be done by Mr. Moore. A number of ponds formed by the interception of ravines or deep gullies on the Fitzhugh farm were drained last year by means of wooden sluices or pipes, as recommended. The sluices have answered their purpose admirably and to the full satisfaction of this farmer. There

are, however, two other contiguous pools on this farm near a deserted log-house which should be connected by a ditch and the deeper one drained by a similar sluice through the towing-path embankment into an original water-course and land ditch near by. The canal bottom, for the greater part of its extent through this farm, is quite dry and has been planted with grain.

4. The latter remarks apply also to the following section of the canal through the lands of Joseph Cone and up to the large stone culvert over White's creek. A short distance easterly from this culvert, an open cut has been made through the towing-path bank to avoid opening the culvert; but as this cut is not quite deep enough to afford satisfactory drainage some little work will here be required. Beyond this point a ravine of considerable size is intercepted, and a small dam has been built across the canal bottom by Mr. Cone for the purpose of making a shallow ice-pond, which is to be removed. Still farther east, the excavation caused by the removal of a waste-weir has been entirely refilled with earth in order to avoid bridging the road-way formed by the towing-path. The outlet for intercepted storm-waters should be restored at once, or else be provided with a large sluice or drain-pipe. From White's creek to the eastern boundary of Mr. Cone's land, the canal bottom is somewhat wet in places, but can be rendered dry as indicated above, without much expense. A little ditching from the outlets mentioned in each direction will be required.

5. The adjoining farm on the east belongs to the Fitzhugh estate, and the canal bottom has here been made dry by the drainage of several ponds formed by intercepted gullies. Near the eastern boundary of this farm, a solid embankment for a farm road has been built across the canal, so that the ditch made last year, for conveying the water easterly into a large creek a short distance beyond, has been obstructed, thereby causing a small amount of water to become stagnant on the western side. The culvert over said creek has now been wholly removed, and a large quantity of excavated earth thrown across the canal bottom on each side, thus preventing the escape of any water. These dams should be cut away and the ditches in the bottom somewhat deepened.

6. The next farm is owned by Hon. James Wadsworth, of Geneseo. Draining ditches were here also excavated last year, rendering the canal quite dry, but in consequence of the construction of two small dams about four hundred feet apart, just west of the hamlet of Keyserville, a shallow pool has been formed for the purpose of watering cattle. Several springs, however, are received into the canal between these two dams, so that a slight current is created in the water, the surplus of which flows over the eastern obstruction and escapes through the ditch into a natural water-course close by through the opening caused by the removal of a waste-weir. Somewhat farther east, and just beyond the school-house of Keyserville, a ravine or gully empties into the canal, discharging its flood-waters westerly through the ditch into the canal bottom to the outlet already mentioned.

7. At a short distance east of this gully a dam has been built across the canal on the lands of Mr. Wadsworth, by which any further flow of storm drainage westerly is prevented, and as no culverts or suitable natural water-courses are encountered in the succeeding two miles, the

drainage of this section of the canal will require careful study. The adjacent flats are here owned in succession by Hon. James Wadsworth, Ebenezer McMaster, Stephen Kemp, Edward Jones and Richard McMaster, and are drained only by a series of land ditches wholly unsuitable for the reception of large volumes of storm-water without causing an overflow upon the fields. Several gullies and brooks are intercepted in this section, each bringing down large quantities of silt with every freshet, so that continuous ditching would here be of little avail. There is, however, a ditch, excavated formerly by the canal authorities for the purpose of intercepting any leakage from the canal, which extends along this entire distance of two miles from Keyserville to Rock Spring creek, and which is located at the foot of the slope of the towing-path embankment. From this State ditch, other ditches for carrying away the water and for draining the flats have been built at certain intervals; and into this system of ditches I would recommend that the drainage of this portion of the canal be conducted through a series of wooden sluices or pipes, to be laid under the towing-path bank and having their upper ends a short distance below the level of the canal bottom and then surrounded by a mass of small loose stones. In this manner the sluices or pipes will not become choked, while the quantity of water discharged by them can readily be regulated. One such drainage sluice should be laid at some convenient point between two consecutive gullies; and a ditch should be cut in the bottom, wherever required, from the sluice in each direction toward the summits or bars washed into the canal from the ravines. The exact points for the insertion of these sluices cannot well be described here, as before they are laid it may be necessary to obtain the consent of the owner of the contiguous land. It should be remarked that upon this portion of the canal no attempt at drainage appears to have been made on account of opposition on the part of the land-owners, and that the water is stagnant therein throughout its whole extent.

8. Near Rock Spring creek, the water is retained by a farm road-way across the canal without any suitable sluice underneath. The owner of the land at this place, Mr. Richard McMaster, objects to receiving into this creek, which flows into certain drainage ditches upon his farm, the storm-waters intercepted by the canal for a distance of two miles westerly, but is willing to have the sluices mentioned above inserted along his farm, provided that the remaining owners will do likewise.

9. The aqueduct on Rock Spring creek has been entirely removed and easterly of this creek ditches have been cut in the canal bottom for drainage purposes, but they require now a little deepening and better grading.

10. An aqueduct over Hartman's creek has also been removed and ditches have been cut in the bottom on each side; they should be made somewhat deeper in order to render the canal prism thoroughly dry.

11. Through the lands of Leonard Fields, the canal is well drained as far as a culvert near the eastern boundary of his farm. The stream passing through this culvert is a small brook which disperses its waters over the adjoining flats, and Mr. Fields objects to having it opened to receive the drainage from the next farm east, which belongs

to Dr. Faulkner, of Dansville. Along this farm and a portion of the adjacent one owned by David McNair, no opportunity for drainage presents itself, even with a sluice through the towing-path bank, unless a ditch is opened through the flats into some water-course to the north. I would, therefore, recommend that Messrs. Faulkner and McNair be required to open such a ditch for the reception of the canal drainage opposite to their respective premises, and that a wooden sluice be then laid under the towing-path bank to conduct the water into the same.

12. Just east of David McNair's residence a brook is intercepted by the canal which has deposited a considerable amount of silt and filled up the drainage ditch in the bottom so as to make the canal bed quite wet for some distance west. To the east the ditch is filled with running water from the brook, and empties farther on into a natural water-course through an opening in the towing-path bank made by the removal of a waste-weir.

13. Between this latter point and Bradner's creek the canal drainage is well executed and requires no further attention. At the creek, however, on the western side, a dam should be built across the canal prism in order to keep high floods in the creek from entering the canal excavation and flowing westerly through it to openings for drainage through the towing-path bank.

14. From the first to the third lock the canal bed is quite dry, but from Canaseraga creek to the fourth lock, the drainage ditch in the canal bottom should be somewhat deepened, and the scour-pool at the foot of said lock should be filled in with earth, which may be plowed and scraped in from the sides at slight expense. Similar pools exist at the foot of the remaining four locks, which should be filled in like manner. Between the fifth and sixth locks, also, the ditch in the canal bottom should be properly graded, as the water therein is now almost stagnant.

15. In the village of Dansville the canal prism is in a dry condition, but the excavations called the "Dansville Slip and Basin" require some attention. I understand, however, that these excavations are not considered parts of the canal, but are owned by private individuals, so that they will come directly under the notice of the local board of health, and will, therefore, require no further notice here, except the general statement that the ditch now cut in the bottom of the "slip" should be better graded so as to carry away the water more rapidly, and that the basin should not be made a receptacle for refuse organic matter.

If the work herewith specified is carried into execution, the drainage of the abandoned canal will be completed without large expense. Measures, however, should be taken to prevent the obstruction of the ditches by dams, or the plugging up of openings into culverts or other water-courses by the owners of the adjacent lands, as otherwise the malarial conditions, which this plan of drainage is designed to abate, will soon again return in the locality.

Respectfully submitted,

EMIL KUICHLING,

Civil Engineer.

The details mentioned in the foregoing paper were carried into full effect during the spring and early summer months of last year, but subject to certain restrictions imposed by the Superintendent of Public Works in conformity with the intent of the act of Legislature authorizing the work. By judicious management, however, and the general coöperation of the land-owners directly concerned in the sanitary improvement, the principal difficulties regarding outfalls were ultimately surmounted, and the canal prism is now in excellent condition from Sonyea to Dansville. Respecting the conditions imposed by the Superintendent of Public Works in this and other similar cases, attention is called to the communication submitted below, wherein reference is also made to a certain abandoned slip and basin in the village of Dansville:

ALBANY, N. Y., *June* 28, 1882.

To the Secretary State Board of Health :

DEAR SIR — Yours of the 27th inst. regarding drainage of abandoned Chemung and Genesee Valley canals, with communication of the local board of health of the town of Groveland in reference to work on certain portions of the Genesee Valley canal, received.

Our foreman, Mr. Berry, on the Chemung canal, has been instructed to work upon plans and carry out the suggestions agreed upon with engineer Kuichling, so far as such suggestions or instructions confine themselves to work upon canal lands from Millport to the Horseheads dam. The drainage of the long level, south of the dam, is not authorized by the appropriation, and no work on this portion of the level can be done or any money expended even if the liability of the village of Horseheads did not exist.

Mr. Kuichling informs me by letter that he has instructed Mr. Berry to remove some bars and debris at certain points in Catharine creek, between lock 45 and the upper cut in canal bank, through which the drainage is to be made.

I have written Mr. Berry that he must disregard these instructions ; that what work he does must be confined to the canal lands and that alone.

If Catharine creek has become filled up it must be opened by the adjacent owners, without expense to the State.

In the case of the Genesee Valley canal, Mr. Napier, who has charge, intended to commence work yesterday.

He has been instructed to confine his labors and the expenditure of money *entirely to the Dansville branch*, which extends from the Shakers to the village of Dansville, and to do his work according to plans suggested by your engineer, so far as possible, without conflicting with the rights of adjoining land-owners, it being my desire not to involve the State or its officers in any unnecessary litigation if possible.

I assume from Messrs. Kuichling and Evershed's reports that they will, with the assistance of the local boards, be able to so plan the work as to overcome any reasonable objections of adjacent owners.

Should any nuisance exist between the Shakers and Mt. Morris, on the main line of the canal, it should be abated by the railroad company, who own the land in fee.

The State should not be called upon to perform work on private property.

The railroad company is amply responsible financially, and in case any nuisance exists on its property which is detrimental to health, the local boards have sufficient authority, if they will but exercise it, to compel its abatement.

In regard to the slip and basin at Dansville, this property has been sold and conveyed by the State to Mr. John McCurdy, and the State has no title to or interest in the same.

The remedy for the abatement of any nuisance in the slip and basin rests entirely with the local board.

This department certainly cannot consent to any work being done or money expended by the State on the slip and basin.

Let me add in conclusion that I will cheerfully unite with your Board, through the foreman in charge, in doing all necessary work to relieve the people residing adjacent to the abandoned canals, as suggested by your engineer, with the hope that his recommendations will not be inconsistent with the appropriation, and that the same will be confined to State lands.

(Signed)

S. B. DUTCHER,
Superintendent Public Works.

(*c*) *Drainage of canal slip and basins at Dansville.*— In the village of Dansville, Livingston county, some trouble has arisen from the long canal slip, and two canal basins that have been abandoned. Of these latter, one is located in the village itself at the end of the slip, while the other is some distance southerly at the termination of the canal proper, near Mill creek. In regard to the former, it will be seen from the above letter of the Superintendent of Public Works that both the slip and the basin are now private property, and therefore should be dealt with by the local authorities, and as to the southern basin, no thorough examination of it and the attendant circumstances has yet been made on account of a misapprehension on the part of our inspector. The case will, however, receive early attention from the committee.

(*d*) *Abandoned Chemung canal drainage.*— Another extensive and highly important work that has been accomplished during the past summer by the Superintendent of Public Works, under the immediate direction of this Board, is the completion of the sanitary drainage of the prism of the abandoned Chemung canal, from the village of Millport to a point near the northern boundary of the village of Horseheads, and to which reference was made in 1881, on pages 30, 284 and 285 of the second annual report. The drainage of the numerous short levels from Havana to the long summit level, beginning at lock No. 45, at Pine Valley, and ending near the southern boundary of Horseheads, had already been completed, with only a few insignificant exceptions, during the summer of 1881; but there still remained the problem of removing the stagnant water from that portion of the summit level which had not been accepted by adjacent landowners and therefore continued to be the property of the State. The general conditions attending this work are outlined in the letter from Hon. S. B. Dutcher, referred to above, and also in the following report from the engineer employed to assist in preparing a plan for drainage:

Report on the Drainage of a Portion of the Summit Level of the Abandoned Chemung Canal.

By E. Kuichling, Civil Engineer.

Rochester, N. Y., *June* 19, 1882.

To the Secretary of State Board of Health:

Dear Sir — In accordance with instructions lately received from your Board to inspect the drainage works constructed last year by the canal authorities along the line of the abandoned Chemung canal between the villages of Millport and Horseheads, in Chemung county, and to indicate what further work should be performed upon this section in order to complete the sanitary drainage of the prism of said canal, the undersigned begs leave to state that on last Saturday, June 17, he made the required examination in company with Hon. George M. Beard, M. D., of Millport, Mr. W. E. Edmister, of the Canal Department, and Mr. J. W. Berry, the foreman under whose supervision the remaining work will be done; and herewith respectfully submits the following report:

From Millport southerly to the hamlet of Pine Valley, a distance of about three miles, the canal excavation winds through a deep and narrow valley, the bed of which rises very rapidly, thereby having necessitated the use of short levels and numerous locks when the canal was built; but at the latter place, the valley suddenly widens, and its bed quickly becomes broad and nearly level up to the village of Horseheads, four and one-half miles south. At a point about two miles northerly of Horseheads, there is, however, a very slight elevation or ridge extending across these flats, in consequence of which one portion of the surface drainage of the upper valley flows naturally in a northerly direction through Catharine creek into Seneca lake, while the remainder is carried southerly through Beaver brook and Newtown creek into the Chemung river. Between the above-mentioned ridge and Pine Valley, large areas of land are in a swampy condition, owing to the defective outfall afforded by Catharine creek, and almost the whole of the surface soil upon these flats is a rich, black muck, of remarkable fertility and value for gardening purposes wherever even slight drainage can be secured.

Through this upper valley, the long summit level of the canal was built at or near the foot of the hills on the western side, and all of the surface drainage from the latter is accordingly intercepted by the canal excavation, which has done much toward the improvement of the land. Some years after the completion of the canal, the Northern Central railroad was constructed through the whole valley, from Elmira to Watkins, and was located by its engineers upon the flats and hill-sides westerly of the canal, and very often in close proximity thereto, so that in many places and for considerable distances the railway embankment forms the present "berme" of the canal prism. By this construction, however, several natural depressions in the upper valley between the canal and the hills westerly thereof, which formerly were overflowed by the water during the period of navigation and formed "wide-waters," were partially cut off from the main channel, thus leaving between the railway embankment and the foot of the hills a number of shallow pools of more or less magnitude, and having communication with the regular canal prism only by means of small passages or culverts at one end.

Upon the abandonment of the canal, the drainage waters which found their way into the various levels soon became stagnant and highly detrimental to the health of the residents of the valley. Complaint was accordingly made of this condition to the proper authorities, and in due time provision was made for effecting the sanitary drainage of all such portions of the prism as had not been formally acquired by the villages of Havana and Horseheads or the owners of contiguous lands. This important work was commenced a little more than one year ago by the Superintendent of Public Works, under the general direction of the State Board of Health; but as it could not be wholly completed before the heat of mid-summer necessarily put a stop to such operations, the execution of the comparatively small remainder was deferred until the present season.

Having thus briefly alluded to the topographical characteristics of the locality, and to the drainage works already completed along the line of the abandoned canal, I will now refer more specifically to the condition of those particular sections lying between the villages of Millport and Horseheads, remarking incidentally that from lock No. 2, near Havana, to the foot of lock No. 26, at Millport, the canal prism appears to have been thoroughly and carefully drained to the full satisfaction of all adjacent land-owners. * * *

From Millport southerly to the former aqueduct over Catharine creek, near the railway station of Pine Valley, the canal prism has been well drained by ditches and cuts through the towing-path bank; and in a number of places the contiguous land-owners have either partially or entirely refilled it, and used the area thus recovered for agricultural purposes. There are, however, along the course of Catharine creek, between lock No. 26 and the aqueduct just mentioned, no less than five (5) large mill-ponds, all of which require the careful attention of the local health authorities in order to prevent them from becoming serious nuisances and prolific sources of malaria. Large portions of the areas of these ponds are quite shallow and covered with a dense growth of aquatic plants, together with the usual green scum indicative of stagnation. The two last ponds of the series are in a worse condition than the others, and are owned respectively by Charles Hall and George Weiser. * * *

At the head of lock No. 44 is the beginning of the long summit level of the canal, extending from Pine Valley station to the village of Horseheads, a distance of about four and one-half miles. As already mentioned, the upper valley now becomes broad and has a nearly level bed, through which the channel of Catharine creek winds in a tortuous and sluggish course toward the almost imperceptible ridge, which divides the drainage waters from the slopes and causes one portion to flow northerly into Seneca lake and the remainder southerly into the Chemung river. From the levels taken last year by Mr. Thomas

Evershed, division engineer of the western division of the New York State canals, the following facts have been deduced. First, that the canal bottom, at or near the head of lock No. 44, is about four and one-half feet above the mean low-water surface of the creek; and second, that at Dean's farm bridge over the canal, at a point about one and three-fourth miles above the lock, there is practically no difference in level between the beds of the prism and the creek, the latter being here nearly 800 feet distant in an easterly direction. Dean's bridge is thus in the vicinity of the low dividing ridge; and as there are no other available water-courses in the valley, it follows that the canal must here either be entirely refilled, or else that the prism must be used for conveying the intercepted waters to some points where a suitable outfall can be obtained. But since the village of Horseheads has secured by an act of the Legislature the privilege of maintaining a depth of water not exceeding three feet in the abandoned canal within its corporation limits, and has caused a tight earthen dam to be built across the prism at its northern boundary, it is obvious that the summit level cannot be drained southerly toward the Chemung river; and hence the northern outfall afforded by Catharine creek can alone be utilized for the drainage of the canal prism between lock No. 45 and the Horseheads dam, a distance of about three and one-fourth miles, in which an available fall of only about four and one-half feet can be obtained without disturbing the existing mill-privilege at Pine Valley station. With so slight a descent in so long a distance, effective drainage of the prism cannot well be expected; but as the canal for nearly the whole of this stretch is in an exceedingly bad condition, the latter can at least be greatly improved by concentrating the flow of the drainage waters into a narrower and deeper channel, instead of allowing them to spread out over the whole bottom.

In the consideration of the problem here presented, it must be remembered that the canal authorities are restricted to the drainage only of those portions of the abandoned canal prism which still remain the property of the State, and that the improvement of adjacent swampy or saturated private lands is not to be taken into account. Large tracts of such land are found on the eastern side of the canal between Pine Valley station and Dean's bridge, but their reclamation or drainage must be accomplished by the individual owners. The recommendations which I have made to the foreman in charge of the work at present being done by the State, are accordingly of such a nature as to cause the abatement, so far as possible, of the nuisances upon the State's lands alone upon this summit level, and any advantage that may thereby accrue to contiguous territory will be purely incidental. The general plan proposed herewith for the sanitary drainage of the summit level from the waste-weir near lock No. 45 southerly to the Horseheads dam may briefly be stated as follows: * * *

1. A drainage ditch shall be cut along the canal bottom from the waste-weir outlet, about 750 feet south of lock No. 45, to a point at or near the farm-roadway bridge over the canal upon the lands of Wilson Dean, no release by adjoining owners, except the Northern Central R. R. Co., having been filed on this section. The ditch to be at least four and one-half feet deep at the waste-weir outlet, and about three and one-half feet wide on the bottom, with a uniformly ascend-

ing grade of about one foot in 3,800 feet, or about seventeen inches per mile, whereby its depth at Dean's bridge would be nearly twenty-four inches, the distance being almost one and three-fourths miles. From this point southerly to the Horseheads dam, a distance of about one and one-half miles, the title to the abandoned prism has been properly acquired by the contiguous land-owners, if my information is correct, and hence the duty of draining this section will obviously devolve upon them. But as an outlet for the intercepted waters is here feasible only through the canal excavation, I have accordingly considered that a suitable channel should be provided at Dean's bridge, into which the water might be conducted.

2. To prevent the ditch from becoming filled up with the sand and shingle washed in by the intercepted brooks or water-courses from the western hill-sides, catchment-basins or areas of sufficient size must be constructed and maintained, in which the heavy material carried along during freshets will become deposited, and leave only comparatively clear water to escape into the new drainage ditch. As all of the intercepted streams between lock No. 45 and Dean's bridge flow across the lands of the railway company, and also since the said company has already filed releases for the adjacent portions of the canal prism, it follows that in order to secure a reasonable degree of permanence for the work now being done by the State at large expense, the said Northern Central Railroad Company should be required to provide and maintain such catchment-basins, or other devices for preventing the deposit of sand, stones, etc., in the new ditch, whereby the free flow of the water in said ditch would be obstructed. A failure to comply with this condition as soon as possible will render the present drainage work utterly useless, and will quickly restore the extremely unhealthy state of the prism that now exists.

3. By the system of drainage herewith proposed, the canal excavation will remain an interceptor for the waters from the western slope of the upper valley, and will also act as a reservoir in times of heavy rain, from which the accumulated water can be gradually emptied into Catharine creek through the waste-weir outlet near lock No. 45. The ditch in the bottom is of sufficient size and grade to remove the ordinary permanent discharge from springs and saturated sub-soil, but it must be kept free from obstructions, and appropriate conditions should be made for its maintenance in the future releases. The flow in the ditch will naturally be quite sluggish, yet the water surface exposed will be greatly reduced in dry seasons from its present condition, and the marshy bottom of the prism will be converted into relatively wholesome soil. Between Dean's bridge and the dam at Horseheads, the owners of the canal excavation should be required either to continue the ditch prepared by the State, or else to partially refill the prism from said dam northerly so as to gain a slight fall in the bed toward Dean's bridge; and the above described plan of concentrating the drainage into a narrow and deep ditch will here also be found effective as well as economical. The only manner of securing the execution of the work through this second section is sufficiently indicated in the general drainage laws of the State, and it will become the duty of the local health authorities to see that the necessary steps therefor shall soon be taken.

Having thus outlined the general plan for the sanitary improvement of the upper or summit level, I will now continue with the specification of the several items of work that should, in my opinion, be performed by the State, and also by the railway company.

* * * * * * * *

The canal bottom from the waste-weir outlet to a point about 5,800 feet southerly is in tolerable order, as it was ditched last year, and the accumulated waters were permitted to escape through three cuts made in the towing-path bank in the vicinity of and opposite to a railroad culvert. At the latter point the surface of low water in the creek is only about two and a half feet below the bed of the prism. * * *

For a distance of about 500 feet south of the above-mentioned culvert, a ditch was cut in the canal bottom but was not continued sufficiently far to secure any substantial relief for the remainder of the section to the Horseheads dam. The new ditch should, therefore, be continued on the same grade through the prism as in the preceding section, but its width on the bottom may here be reduced to three feet from said culvert to a point opposite the opening in the railway embankment for the drainage of a long and narrow pool or marsh on the western side thereof. This pool appears to have been a "wide-water" of the canal, but is now separated from the latter by the railroad, and has developed into a serious nuisance. As it is wholly upon the premises of the railroad company, its owners should be required to drain it as soon as the outfall has been provided. There is also in this section of the canal one or two other culverts under the railway which discharge considerable silt into the prism, and which will require the construction of catchment-basins upon the lands of the railroad company in order to prevent the obstruction of the new ditch.

Between the pool referred to and Dean's bridge, the drainage ditch in the canal bed should be continued on the same grade as before, but its width on the bottom may be diminished to about two and a half feet. In this section two small culverts under the railway bank convey the drainage of the western hill-sides into the prism, and similar precautions to prevent the filling up of the ditch must be observed at those places as are necessary elsewhere.

In the excavation of this ditch from the waste-weir outlet to Dean's bridge, or the end of the premises still owned by the State, the earth removed should be cast out against the sides of the prism and then be properly graded or trimmed, so as to leave the bottom uniformly sloping toward the trench, instead of being piled up in the form of one or two ridges behind which the water will accumulate and become stagnant.

The remainder of the canal from Dean's bridge to the dam at Horseheads has been acquired by the contiguous land-owners, and its drainage will, therefore, come under the direction of the local health authorities, as has already been intimated. The water in the prism is about two feet deep throughout the entire section, and is covered with the usual scum of algae. It is derived mainly from the lateral drainage ditches constructed for the improvement of the marshy and saturated lands easterly of the canal; but by the methods indicated in the foregoing, I believe that all of the water can be effectually removed during the dry seasons and the existing nuisance reduced to one of very much smaller magnitude.

In conclusion I would also remark that the drainage of the summit level of the abandoned canal would be greatly facilitated if the southerly outfall toward the Chemung river could be made available by the drainage of the prism within the corporation limits of the village of Horseheads. The water here retained is about three feet in depth and is evidently in an extremely unwholesome condition throughout the greater portion of the section, which is about one and one-fourth miles long. Aside from the rain-fall, it is derived from a number of springs in the bottom near the dam; and when the accumulation reaches a certain height it overflows through a waste-weir into Newtown creek. The inhabitants and officers of the village are beginning to realize the evil effects of such a large area of stagnant water and are now anxious to return to the State the privilege which they have acquired by legislative enactment.

Respectfully submitted,
EMIL KUICHLING,
Civil Engineer.

Work was commenced very soon after the inspection by the engineer, and was continued until it became evident that the funds available for this drainage would not be sufficient to complete the large ditch that had been planned, and hence the general directions to the foreman in charge were modified so as to abandon further work on the large ditch and so to secure the drainage of the worst section of the summit level, beginning at Dean's bridge and extending about 4,800 feet northerly to the large cut made in the previous year through the towing-path bank. This section of the canal was accordingly ditched in a proper manner and with excellent results. The bottom of the prism is now virtually dry between the points mentioned, and the former swamp has been replaced by a narrow stream of running water, whose surface is usually from eight to sixteen inches below the canal bed. In the section south of Dean's bridge, the canal prism had become the property of the adjoining land-owners; hence the Superintendent of Public Works made no effort to do more than to provide an outlet through the above-mentioned ditch for the stagnant water thereupon. By said outlet, however, the depth of the water was soon reduced from about two feet to only a few inches; and with proper effort on the part of the owners, at least one-half mile more of the prism south of Dean's bridge can now be drained. To remain effective the new ditches must furthermore be guarded from becoming obstructed by the deposit of silt, pebbles and stones carried along in times of heavy rain-fall by several runs or natural water-courses, which pass through culverts under the track of the Northern Central railroad and empty into the canal prism; and as the railroad company has become the owner of half of the prism at all of these points, it seems to be clear that the duty of preventing the obstruction of the new ditches from the sources indicated belongs to said corporation alone.

It will be observed from a perusal of the foregoing report of the engineer and the preceding remarks, that the only natural difficulty to the complete drainage of the entire section of the summit level still remaining the property of the State is the lack of a convenient and suitable outfall. The natural water-courses in the valley are actually higher than the bottom of the prism in the vicinity of the low dividing ridge; but with an improvement of their channels, the drainage of the canal would be greatly facilitated, and large areas of wet and swampy land could also be reclaimed. This work, however, could not be undertaken by the Board, since under the existing statutes relating to drainage, all such improvements can be executed only by the land-owners interested. Accordingly, as the latter could not be induced to incur the necessary expense for providing outfalls, the drainage of this section of the summit level was limited by the attendant conditions.

From advices and reports of physicians residing in the districts where the canal has now been drained, the sanitary improvement appears to be eminently successful and fully justifies the action and expense incurred by the State.

(*e*) *Cost of the drainage works executed by the State on the abandoned Chemung and Dansville Branch canals.*—Before leaving the subject of the abandoned Chemung and Dansville Branch canals, it may be of interest to refer to the expenditures of the Department of Public Works under act chapter 593 of the Laws of 1881, by which an appropriation of $6,000 was granted for the purpose of removing the stagnant water from the State's property along the line of the said canals. The work has extended over a period of two years, and was executed by the Superintendent of Public Works, under the general direction of the State Board of Health. There has been expended in the sanitary drainage of these two canals during 1881 and 1882:

1. On the Chemung canal	$3,309 21
2. On the Dansville Branch canal	1,469 77
Total	$4,778 98
Thus leaving on hand a balance of	$1,221 02

This balance left from the original appropriation will be sufficient to complete all that requires attention next spring on the line of these two canals, so far as such work can be completed without the co-operation of the local authorities and residents directly interested and benefited.

(*f*) *Drainage of Summit level of Chemung canal in the village of Horseheads.*— At Horseheads, the existence of an extraordinary number of cases of malarial fever is ascribed to the stagnant water contained in the section of the canal embraced in the village limits, a distance of about one and one-half miles. The control over said section was given by special legislative enactment (chapter 379 of 1880) to the village, and the water is retained therein by dams at each end. Relief can easily be obtained by draining southerly into Newtown creek, but the expense involved seems to be greater than the village is inclined to pay, and hence an appeal for aid will perhaps be made to the Legislature. It should here be remarked that the sanitary condition of the entire district from Pine Valley to Horseheads cannot be permanently improved without resorting to a comprehensive system of drainage and regulation of the natural water-courses; and that such an improvement is rendered extremely difficult, if not practically impossible, in consequence of the absence of suitable laws to govern cases of this kind where a number of different townships and corporations are interested and should co-operate in bringing about greatly needed results.

(*g*) *Abandoned old canal in the village of Fairport.*— In the village of Fairport, county of Monroe, the local health authorities attributed the prevalence of malaria to the existence of two abandoned sections of the original Erie canal, one at the eastern and the other at the western side of the village. An engineer was sent by the Board to examine the locality, and a clear presentation of the case is contained in the following report:

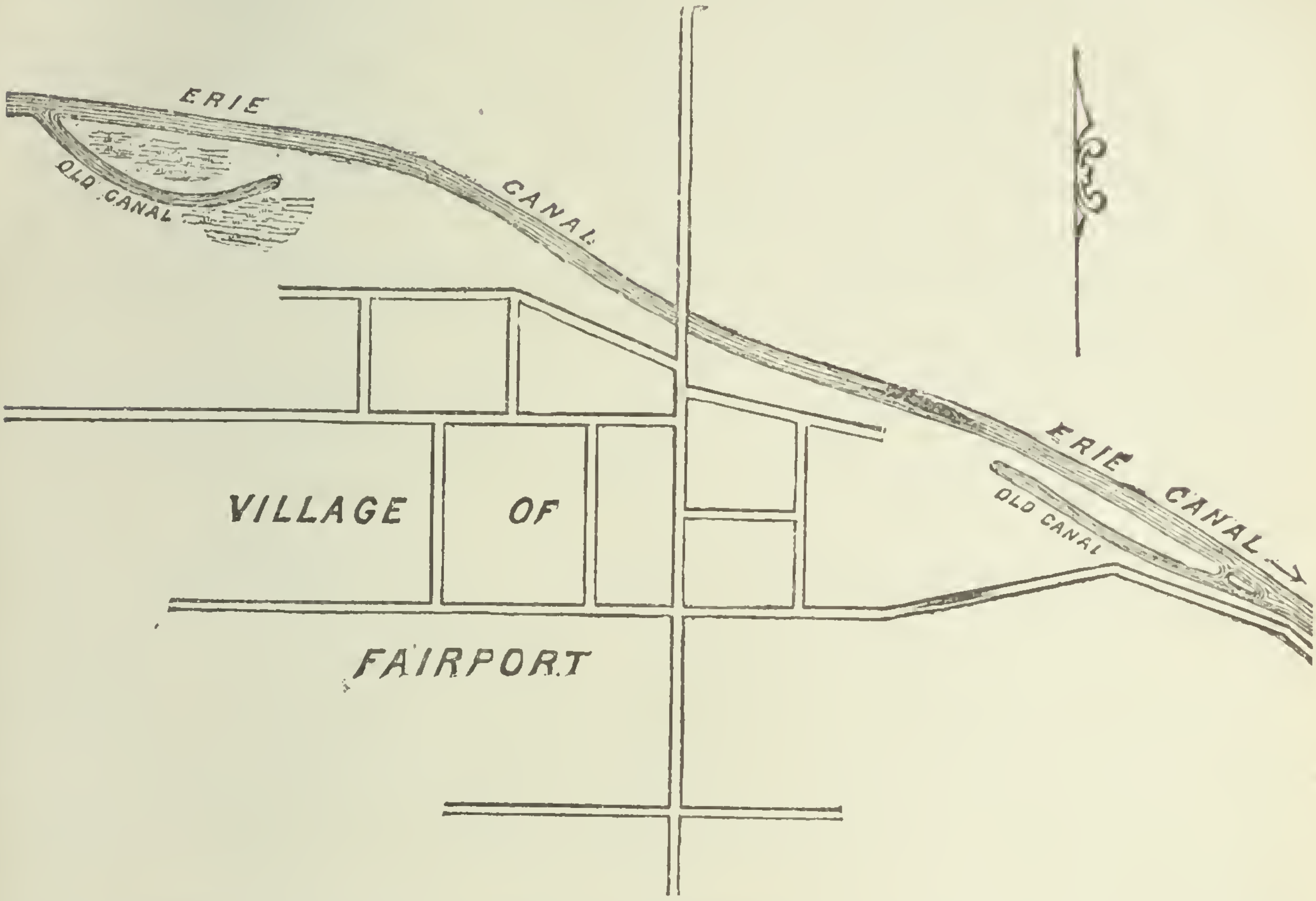
ROCHESTER, N. Y., *April* 19, 1882.

To the Chairman of Committee on Drainage, Sewerage and Topography of the New York State Board of Health:

DEAR SIR — In accordance with instructions received from your Board on the 15th inst., to examine certain nuisances existing in the villages of Fairport and Spencerport, in Monroe county, and described in the inclosed memorials from the inhabitants of said villages, the undersigned begs leave to state that he visited the localities mentioned, on the 17th inst., and submits herewith the following report:

1. At Fairport, in the town of Perrinton and county of Monroe, there are two sections of the old Erie canal, as originally excavated but now abandoned, located respectively on the eastern and western sides of the village, but wholly within the corporation limits. These excavations lie on the southern side of the present enlarged canal, being separated from the latter by comparatively narrow strips of earth and having communication therewith at only one end, as will be seen from the appended diagram or sketch.

During the period of navigation, these two portions of the abandoned canal became elongated pools of stagnant water, lined with a profuse growth of aquatic plants, and form moreover convenient receptacles for retaining any floating matter that may find its way into them from the main channel. Situated also near the foot of an extensive hill-side with gentle slopes, they furthermore intercept a considerable amount of surface drainage, and as the water in these pools has no current, all substances of organic origin carried down from the fields by storms will tend to lodge in them and assist by their decay in the development of malaria. The eastern section, of which particular complaint is made, seems also to have been used as a dumping-ground for various kinds of refuse, notably that from fruit-canning establishments, whereby its sanitary condition has not been improved. This excavation, which is about 1,000 feet long, forty feet wide and four feet deep, is very close to the present canal, the intervening strip of earth varying in width from fifteen feet to fifty feet; and for half of its length it extends along a highway bordered by numerous dwellings, while the remainder is in the rear of a thickly-settled portion of the village, so that an east wind will waft the noxious vapors arising from it into almost every house.



To remedy this evil I would suggest for your consideration two plans, the first being to fill up the entire excavation with fresh and wholesome earth, and the second involving the removal of the narrow bank of earth which now separates the nuisance from the present canal, thus forming a " wide-water." The latter plan is somewhat less expensive than the former, since no damages to land are thereby incurred; but the entire refilling of the old excavation would be more satisfactory to the inhabitants of the village. The cost of removing the intervening strip of earth will probably not exceed $450.

The second section of the abandoned canal, which is located in pasture land near the western boundary of the village, is about 700 feet long, forty feet wide and four feet deep, and has the form of a curve at first receding from and then approaching the new or enlarged canal, as indicated upon the diagram. The greatest width of the segment of land between the present and former channels is about 100 feet, and upon this area there are two small patches of swamp. Adjacent to the old canal the original surface of the ground is low, and when the Erie canal is in operation, the soil becomes saturated, thereby facilitating the growth of reeds, rushes and other aquatic plants.

On account of the considerable distance between the two channels, which varies from forty to one hundred feet, as well as from the fact that there is close at hand a large quantity of earth which was removed from the prism of the new canal during its construction and deposited in the form of "spoil-banks" upon the adjacent land, it seems to me that the simplest and cheapest method of effectually disposing of this nuisance will be to cause the abandoned excavation to be entirely filled up with the material from the spoil-banks just mentioned, especially since the latter constitute by their height a barrier to the natural surface drainage from the slope of the hill to the south. I estimate that the volume of earth required to fill up this portion of the old canal will be about 4,000 cubic yards, and that the expense of the work, if judiciously performed, will not exceed $350. In this solution of the problem, the nuisance in question will not only be permanently abated, but an area of about one and one-half acres of valuable farming land will also be reclaimed, which might afterward be sold to the contiguous land-owners, whereby a considerable portion of the amount expended upon the improvement might be recovered. It may also be remarked that in view of the benefit which the surrounding land will derive from the filling up of the old excavation and the removal and grading of the spoil-banks alluded to, the owners of the adjoining lands might perhaps consider it sufficient compensation for performing this work to receive from the State a title to the area thus reclaimed.

As this matter immediately concerned the canal authorities, it was accordingly referred to the Superintendent of Public Works; but owing probably to lack of funds for performing such work, action in the premises was limited to making one or two additional openings through the narrow strip of bank separating the new from the old canal in the eastern section. The relief obtained by this procedure, however, is stated to be entirely insufficient by the village board of health.

(*b*) *Abandoned old Erie canal in the city of Rome.*— A similar, but more extensive nuisance, arising from stagnant water in the abandoned original Erie canal extending through the entire southern portion of the city of Rome, Oneida county, was also brought to the notice of the Board. The general facts relating to this case are contained in the subjoined report of the engineer:

ROCHESTER, N. Y., *December* 1, 1882.

To the President of State Board of Health:

DEAR SIR — Permit me herewith to transmit to you the following results of my inspection, made by request of your Board, on October 7, 1882.

On the Abandoned Canal Nuisance at Rome, N. Y.

In the southern portion of the city of Rome, in Oneida county, a section of the original Erie canal, about two miles long, has been abandoned by the State; and as the bottom of the prism is virtually level, and no adequate provision for draining it appears to have been made, the natural surface drainage from the adjacent level territory necessarily accumulates and becomes stagnant therein, thus giving rise to considerable malaria among the residents of the locality. It is of this section of useless canal that complaint has been made and the assistance of your Board invoked by the citizens for procuring relief from the nuisance through the canal authorities.

The ground on both sides of the abandoned canal is quite flat for long distances, and from the black appearance and peaty character of its surface layers, it presents unmistakable evidence of having formerly been a swamp or marsh. Through this soil the canal prism was excavated, and when it was subsequently rendered useless by a change in location of the enlarged Erie canal to a more desirable route somewhat further north, the old channel served only as a drainage ditch for the district, with an outlet into Wood creek at the south-western corner of the city. This flat area under consideration is merely the small central portion of the almost level bottom of the broad valley which extends east and west through the middle of the county, and which is drained easterly by the Mohawk river and westerly by Wood creek and other small streams into Oneida lake; and being thus on the indefinite summit separating the two great drainage areas, the proper method of removing the water becomes a subject for careful study.

At the eastern end of the section of the abandoned canal, a small creek naturally tributary to the Mohawk river has been partially dammed by the canal authorities, so as to divert the summer flow of said creek into the canal prism, with the view of creating therein a current running westerly to the outlet into Wood creek about two miles distant, and thus preventing malaria. The volume of water in the former creek is, however, so slight in dry seasons, and the dam at the junction with the canal is so much out of repair, that very little relief for the unsanitary condition of the long line of old prism can be secured from this source, even if it were practicable to obtain sufficient fall toward Wood creek. Small bars have also washed into the bottom of the prism at various points from road embankments and lateral drainage ditches, which, in conjunction with a profuse growth of aquatic plants, obstruct the flow of the water and render it stagnant and offensive.

But, in addition to the nuisance caused by the stagnant water and the vegetation in the abandoned canal, the latter is furthermore defiled by receiving the contents of a large public sewer in James street, as well as the wastes from a number of adjacent houses from Williams Bros.' knitting mill, and from Etheridge & Co.'s petroleum tanks. The James street sewer is still quite new, and is intended nominally for sub-soil and surface drainage purposes alone ; but it is safe to predict that before long the organic wastes from a large number of dwellings will be conducted into it, and hence find their way into the canal excavation. The outlet of the private sewer from the knitting mill is strongly marked by appreciable deposits of fæcal matter, paper, cotton and wool-yard wastes, and a white substance resembling lime. A short distance westerly is found the outlet of the drain from the petroleum tanks and oil-warehouse above mentioned, which occasionally delivers considerable oily matter into the prism. From the knitting mill sewer outlet to the junction with Wood creek, the general condition of the old canal may fairly be characterized as very unhealthy during the summer months at least.

Close to the western end of the section, the outlet from a canal dry-dock enters the abandoned prism ; and as the sluggish and small creek cannot carry off with sufficient rapidity the large volume of water which is quickly discharged in emptying the dock, the prism accordingly becomes partly filled, thereby setting back the water for a long distance easterly and raising its level until the discharge from the dock ceases, whereupon the surplus water gradually flows away through the creek. We, therefore, also have here in the summer season a fluctuating water level in addition to the other sources of complaint.

Wood creek, which is thus the general outfall for all of the drainage and liquid wastes enumerated in the foregoing, is a small stream flowing slowly in a very tortuous natural channel through the level peat fields for a considerable distance westerly of its junction with the old canal; but its bed afterward has a greater declivity, so that a suitable outfall for an artificial drainage system can readily be found. An improvement was attempted during the past summer by the excavation of a long ditch about four feet wide straight across the fields owned by George Hammill, from the western end of the old canal to a point where the creek has a little more descent than above; but as the ditch was cut through the peat with vertical sides, the latter soon began to cave away and serious bars were formed, thus partially neutralizing the benefit derived.

The case under consideration is plainly one of originally inadequate drainage, combined with a sewage pollution that has not yet reached formidable proportions, but which is extremely liable to increase year by year. I have, therefore, recommended to the local health board to give the matter the most careful attention, and to cause the necessary surveys and plans for the sewerage and drainage of the entire low district of the city to be prepared, and then to coöperate with the canal authorities in the proper and permanent abatement of the nuisance. As I was not authorized by your Board to make an extended survey at this time, no definite plan can now be submitted, and the suggestion is ventured that the question of the drainage of the abandoned canal section be referred to the proper canal officials for examination and report. In regard to the disposal of the sewage from public and private sewers and drains, the municipal authorities should deal with this subject promptly and independently.

The drainage problem will, in my opinion, admit of a comparatively simple solution, and its cost should be defrayed by the several parties to whom the responsibility and the resulting benefits legitimately belong. The sewerage problem is another and distinct matter, the consideration and execution of which is the duty of the city alone.

Respectfully submitted,

EMIL KUICHLING,
Civil Engineer.

From the foregoing it will be seen that the radical solution of the problem involves not only considerable research and field-work by the canal engineering department, with reference to the natural water-courses in the low or marshy districts, but also the coöperation of the municipal authorities in providing a suitable outfall for the surface drainage and sewage of that portion of the city. As we are not advised that any further steps have been taken in the matter, no additional remarks are here necessary.

II. Obstructed Natural and Artificial Water-Courses and Miasmatic Disease in Rensselaer, Washington, Oneida and Monroe counties.

(*a*) *Obstructions in the Hoosick river near the village of Schaghticoke.*—First among complaints received by this Board through the Governor with regard to malaria caused by stagnant water in obstructed channels, we mention the case of the village of Schaghticoke, in Rensselaer county, to which reference was made by the Board in its first annual report, and which has been made the subject of certain executive orders by the Governor.

It appears that some thirty years ago the northern, which was then the principal, branch of the Hoosick river was obstructed by a high railway embankment at a point just beyond the village limits; and that, in consequence of this obstruction and the resulting diversion of the stream into a channel that was formerly of secondary importance, the water in the obstructed branch of the stream became stagnant, thereby causing miasmatic emanations and after many years inflicting a vast amount of suffering upon the residents of the village. The malaria has been steadily increasing for several years past, and has at length attained such intensity as to bring the greater part of the entire population of the large village under medical treatment. Owing to the peculiar relations of the railroad corporation, which claims the ownership of the said embankment, to the construction company now working that railway, and also to the many hindrances of a technical and legal character that were from time to time interposed, the abatement of the evil could not be procured under any order or action by the village or town authorities; therefore the matter was brought to the attention of this Board, by the Governor's order through petitions and statements received by him. Repeated examination and continued investigation in the locality have been duly made.

The medical facts connected with this miasmatic locality have been studied by physicians practising there and by officers of the State Board of Health, and it is considered that there is no longer any doubt that, whatever may have caused the introduction of malarial germs at Schaghticoke, the long chain of stagnant pools grown full of aquatic vegetation, and having a long extent of mud margins, sufficiently account for this miasmatic poison that now afflicts the populous village which lies just to the west of the eighty acres of uninhabited flats that have been cut off by the said embankment, as shown in the disease map found in a subsequent chapter of this appendix, and partially delineated upon the small chart here following as part of Engineer Kuichling's report.

As was shown in the Board's first annual report (pages 190–192) the accusation by the local board of health was from the first against the continuous stagnant pools caused by the railroad embankment obstruction. This committee found this accusation fully confirmed; and that, notwithstanding that many years elapsed before these pools became so filled with decaying organic matter as to prepare a hot-bed for malaria, there is no doubt of the fact, that the entire eighty acres of flat-land, through which these old channels, now pools, have their course, have become productive of the miasmatic diseases which afflict the locality beyond.

The accompanying affidavit, made by two of the oldest and most trustworthy citizens who gave testimony before this committee in 1880, serve to clear up any doubt the readers of this report might have concerning the former salubrity as well as of the recent causes of unhealthfulness in that locality.

Affidavit of Edward N. Masters and James Camfield:

RENSSELAER COUNTY, *ss.:*

James Camfield, of said county, being by me duly sworn, deposes and says that he resided in Schaghticoke, in said county of Rensselaer, at the time and prior to the construction of the railroad track through and adjacent to the village of "Hart's Falls," in said town of Schaghticoke, and now resides there; and that he knows the fact, that until the construction of said railroad, the Hoosick river flowed toward Schaghticoke point in two channels for a distance of more than half a mile, before reaching said point at which the separate channels and streams united in one; and further that the western or right channel seemed to be the main stream of the river at the dividing ridge of the rock-bed of the river where the two channels and streams of said river took their courses to the right and left as flowing onward toward said point known as the village of Hart's Falls, now Schaghticoke; and further, that in the construction of said railroad the said western channel and stream were completely obstructed by filling in and making an embankment along and near the ridge of rock, upon and by which the river was turned into its aforesaid two channels and separate streams so that there has until the present time ceased to be any current or flowing of said river through said western channel; and further, that the bed of said channel and all its accessory and cross or connecting channels by which numerous islands are formed between said main and now stagnant channel, and the railroad track, which is a continuous embankment throughout the length of the aforesaid track of lowland, from the said place of obstruction to the aforesaid point, has become a vast stagnant pool and series of connecting pools in which there is no current. Whereas, before said obstruction the western channel in diverting the waters of the river, as herein described, there was a constant current and movement of the streams in all the channels and that in those days the entire vicinity was known to be remarkably healthful.

JAMES CAMFIELD.

Subscribed and sworn before me,
this 9th day of August, 1880.

EDWIN BURLINGAME,
Notary Public, Rensselaer county, N. Y.

(The affidavit of Edward N. Masters is precisely the same as the above.)

The Board's first report to the Governor fully substantiated the complaint from the residents of the village, whereupon an order was issued by the Governor requiring the parties who are responsible for maintenance of the nuisance to abate it in accordance with certain specifications which he made.

The following is the text of the report made by the Board to the Governor:

"We find that miasmatic diseases have become so prevalent that a large proportion of the inhabitants of the village, perhaps even a quarter, have been suffering from the evil during this summer.

Miasmatic diseases do not seem to have been noticeable in Hart's Falls until about five years ago. Since that time they have affected a greater number each year. The power of the evil has evidently been increasing, until now it has reached such proportions that immediate relief is imperatively demanded to prevent further suffering and loss of life.

The cause.— The cause of the disease, in our judgment, is to be found neither in the water supply nor in the local drainage. The greater part of the persons affected drink cistern water, and the remainder well water. The condition of drainage shows nothing unusually unhealthful. The fact that most of the persons affected by malaria live on the east side of the town leads us to look for some unhealthful condition near this locality. The eastern part of the village is built on a high bank immediately overlooking the chain of shallow, swampy pools on a uniform level, occupying what was once a bend three-quarters of a mile long, in a main channel of the Hoosick, but is now by the B. H. T. & W. R. R. embankment, cut off from the river, whose stream is turned into another course. The pools cover an area of about three and a half acres; but owing to the tortuous forms of the old channels they have probably three miles of shore line, much of it with a swampy border. The water is filled with algae. The lower end of the chain of pools opens through a narrow cut in the railroad embankment into the Hoosick river, where the water is backed up from the paper mill dam. Sometimes the water runs from the river into the pools, and sometimes from the pools into the river, depending upon the height of the water above the dam, which is affected both by the floods and by the commercial uses of the stream. By the successive backing up and outflow of the river water, through the culvert, the surface of the pools fluctuates, leaving at times a margin covered with decaying algae, exposed to the sun, where a few days or hours before, the water had been several inches deep, or even several feet, in case of unusual floods. When a body of water contains a large amount of organic matter, the exposure of its shores below the usual water line in hot weather is now believed one of the most favorable conditions for the production of malaria. The old channel pools at Harts Falls, having the requisite condition of excessive vegetation and fluctuating water surface, are, therefore, in our judgment, the cause of the miasmatic diseases which prevail in the village.

The remedy.—There are three methods of treating the old channel pools, which, with a greater or less degree of certainty, may be expected to render them partially or wholly harmless.

The first is to permanently cut off all communications between the pools and the river, and by cutting through or around the rocky point at the south end of the town, drain the water from the pools into the river below the paper mill dam. Tile drains would then have to be laid in the old channels and the exposed bottom covered with dry earth. The outfall is reported by the surveyor to be sufficiently great to thoroughly drain the whole area. The low ground included within the railroad embankment would doubtless be rendered healthful by being thus thoroughly drained and covered; and there is every reason to believe that malarial disease would essentially disappear from Hart's Falls.

The second method is to convert the old channel into a pond with a slow current whose surface shall be kept at a uniform level by a dam at the lower end. This plan requires that an eighteen-inch tube should be carried from the present channel of the river under the railroad embankment to the upper end of the old channel, and made to discharge into the upper pool. Arrangements should be made to turn the river water into the tube, and it should be given fall enough for rapid discharge. The amount of water admitted into the tube would be controlled by a gate. At the lower end of the old channel, between the abutments of the short bridge in the railroad embankment, a dam would be required with flush boards or a gate high enough to keep out the river floods while allowing free overflow from the pond in ordinary stages of the river. The surface of this pond should be at least a foot higher than the present level of these pools. The water would then cover most of the swampy places, and have a more abrupt shore line than at present. Although this pond would necessarily retain much of the vegetable growth now existing in the old channels, which is a source of danger, yet the removal of the condition of shores alternately covered with water and exposed to the air would probably afford partial relief from the malarial influences. The permanence of this remedy cannot be predicted with certainty, but it is probably the cheapest and most quickly applied; and will interfere with the vested water rights of the powder mill much less than an attempt to restore the river to its old channel.

The third method of relief is to restore, as nearly as possible, the old conditions, by making a large opening in the railway embankment and cutting down the rocky bar at the head of the old channel so as to allow a large part of the river to flow, as it did formerly, by the north branch. The floods would soon sweep out much of the accumulated vegetable growth, and to a certain extent scour the banks. The current in this branch of the river would not be strong at ordinary stages of water, for it would still set back from the paper mill dam up the old channel. This paper mill dam, as reconstructed within the past few years, forms such an impediment to the outflow of the river that the former current of the old channel cannot be restored by simply admitting water at its head, nor will the amount of water admitted be as great as formerly. The current might, however, be sufficient to keep the river healthful, aided by the action of floods, were it not for the oscillations caused by such water from the paper mill dam at low water when there would be no flow through the north channel. While this method of treating the channel would probably afford some relief for the village from malarial trouble, it would be difficult to carry out on account of its interfering with the use of the water by the powder company, and the expense of the large cutting and bridge at the railway embankment.

The execution of the Governor's order has been delayed because of claims set up by the owners of the hydraulic franchises on the south and only channel of the river in view of the fact that said order required the reopening of the old flood-way into the north channel; and the Board was required by the Governor to continue its examination of the facts, and to report to him. It was also claimed by this committee and by others that even if that order was executed, the river had in thirty years worn its south or left-hand channel so deeply that it would not give an inflow through its original course to the north channel in periods of drought. Accordingly, on September 18, 1880, the following report was made upon the conclusions reached after the results of further engineering examination, as hereto annexed, were considered.

This Board merely formed the conclusions presented concerning the second, and, as believed, the best plan submitted by this committee and recommended in the report of 1880. It recommends that the pools be transformed into a controllable artificial lake, with a large and constant inflowing eastward, and a corresponding outflow at the southwest point of miasmatic area. All such outflowing to be governed with mechanical certainty.

To the State Board of Health:

In accordance with recent instructions from your committee on drainage, sewerage and topography, to examine the malarial nuisance caused by stagnant water in former channels of the Hoosick river at the village of Schaghticoke, in Rensselaer county, N. Y., the undersigned begs leave to state that on the 6th inst., in company with Dr. Harris, Dr. Hunt and Hon. Erastus Brooks, of your Board, he made such examination, and would now submit the following report:

The locality under consideration has already been described so fully in former reports made to and by your Board that any further allusion on my part to the topographical and geological characteristics of the district is superfluous; and I will, therefore, only invite your attention to the accompanying map, which I have carefully reduced from a large tracing kindly loaned to me by Mr. A. Sipperley, of Schaghticoke, who caused it to be accurately surveyed and drawn by a local engineer; and who vouches for its correctness. As I could not obtain a leveling instrument in the village, I was accordingly unable to test the levels of the water surface at different points, and hence my conclusions are predicated entirely upon the data submitted.

It appears that prior to the construction of the railway embankment now owned and occupied by the Boston, Hoosac Tunnel and Western Railroad Company, the Hoosick river flowed through an alluvial area on the eastern side of the village in three distinct longitudinal channels, which were connected by two transverse channels, so as to form four large islands, as shown upon the map. Of these channels the middle one seems to have been the principal watercourse, thus making the course AEDFC (see map) the former main channel. The railway embankment was built across the two islands included between the middle and southern channels, to a height of about thirty feet above the general water surface of the stream, and in such manner as to completely cut off or obstruct the former main course AE, and the subsidiary course BD. At C, however, an opening about forty-five feet wide was left in the embankment through which the drainage waters, intercepted directly by the former channels, could find an outlet into the river, and which served, also, to admit the water from the river into the old channels, and there become stagnant. The rapid fall of the river affords an excellent water-power, which has been developed in this particular locality by the dams K and L, of the powder company, and the dam M, of the paper mill, all of these dams and water privileges having been in existence substantially as at present long before the railroad was built. By referring to the levels inscribed upon the map, it will be seen that the water in the present main channel of the river is set back by the dam M, so as to flow through the opening C, thus rendering a direct drainage of the former channels impossible without serious damage to the water-power of the paper mill.

The periodical drawing down and refilling of the pond or reservoir created by the dam M, in dry weather, lowers and raises the water surface in the former channels, so that large areas of muddy margins of the said channels are alternately exposed to the sun and then again covered with water, conditions peculiarly adapted to the development of malaria. As these stagnant-water channels north of the railroad bank have been declared a nuisance and dangerous to the public health the problem now is to indicate how relief can be obtained.

For this purpose two general plans are herewith submitted for your consideration ; the first being the closing of the opening at C, and the drainage of the basin and channels by means of a suitable culvert or tunnel piercing the rocky ridge upon which the main portion of the village is built and emptying into the river at some convenient point northerly of the dam M, where ample fall therefor can be secured ; while the second plan contemplates the restoration of a perpetual current in the former channels by admitting, through a new opening to be formed in the railway embankment at the point B, a large proportion of the whole flow of the river into said channels, whence it will escape through the present opening at C. Both of these plans are practicable *per se*, but each involves a large expense, and the consideration of numerous complicated interests.

In the drainage plan, there is involved the question of the undeveloped water-power owned by the powder company, northerly of the railroad between the old channels BD, and AE, so that without a full knowledge of the intentions of said company with regard to any transfer of water-power from the ponds created by the dams K and L to the old main channel EDF, no definite dimensions can be determined for the outlet tunnel. The diversion of any such water from the stream at K or L and its discharge into the river below the dam M would also cause damage to the water privilege of the paper mill, for which compensation would doubtless be demanded. It will thus be seen that serious difficulties invest this method of abating the nuisance unless the owners of the two water privileges mentioned arrive at a satisfactory understanding. Could an agreement of this kind be concluded, it is my opinion that the construction of the drainage tunnel or culvert would be the best and most economical solution of the problem.

Since, however, neither the powder company, nor the paper mill owners appear to have been in any manner responsible for the creation of the nuisance complained of, it is difficult to see how any order can be issued which will affect their rights and legally acquired privileges; and hence, without their voluntary coöperation in the drainage plan, some other mode of relief must be devised. The second plan suggested above simplifies the subject greatly and divests it of the complications just mentioned, besides being nearly as efficient in affording relief.

As already stated, the second plan involves the production of a constant current in the water now stagnant in the former channels by the introduction of a liberal supply from the present channel at a point further up stream where a fall sufficient to induce motion can be obtained. If such supply were to be taken from the pools or ponds above the dams K and L, the water privileges of the powder company would suffer injury; and hence it is obvious that, in order to avoid tedious litigation, the water supply should be introduced below the lower dam L of said company. Fortunately for this plan, the lower dam has within the past year been moved about 200 feet up stream, from its former position, and is now located upon a rocky crest or ridge in the river bed, between which and the surface of the water at B there is several feet fall. By referring to the levels (see map) it will be found that from B to D and from B to C, there is a fall respectively of $(72.18-71.24) = 0.94$ feet $= 11\frac{28}{100}$ inches and of $(72.18-71.05) = 1.13$ feet $= 13\frac{56}{100}$ inches. With such a descent and a sufficient volume of water, a current of about two feet per second, or nearly one and one-half miles per hour, can readily be obtained in the former channels; and if a strong dam or embankment be thrown across the former channel at D, the water introduced at B will flow around the whole "elbow" and regain the present river channel through the opening C, above the dam M of the paper mill. In this manner the water privileges of all parties concerned will not be affected, and relief for the suffering inhabitants of the village can readily be found. The conditions necessary in the foregoing project are the formation of an opening not less than about forty feet wide in the high embankment over the old channel BD; the construction of a secure dam across the former middle channel at D; the maintenance of the water surface at a fixed low-water level at B by means of an artificial crest or submerged dam across the present river channel; and the similar maintenance of a constant low-water surface at C by a submerged weir built between the present abutments of the bridge at C, so as to render the water surface in the former channels independent of the fluctuations due to the drawing down and refilling of the pool above the paper mill dam M. By the execution of this plan, it will be seen that any preëxisting necessity for action in that section of the railroad embankment between the dams K and L of the powder company, as the latter are now constructed, may be removed.

It may also be remarked that a considerable amount of other work must be performed in clearing away bars and other obstructions from the former channels, and in removing the dense growth of aquatic plants which has accumulated during the past twenty-five or thirty years, so as to afford a free flow for the water, but as this work is clearly the duty of the several riparian owners, and can readily be enforced by the local board of health, it is unnecessary to recount these details here.

The suggestion has also been made that a certain amount of water should be delivered through a pipe into the head of the "elbow" from the ponds above the dam L or K of the powder company. I regard this proposition as entirely inadequate to afford practical relief, since the volume of water required to induce proper motion in the former channels is vastly greater than a pipe of even twenty inches diameter would deliver under a head of ten feet and a length of four hundred feet. Such a pipe would discharge about 1,300 cubic feet per minute, which would cause in only *one* channel, forty feet wide and two feet deep, a current of less than one-fifth mile per hour, but which would, on the other hand, represent about twenty horse-power, is discharged through a good turbine under the same head. This volume of water, which would not suffice to create sufficient motion in the various old channels, is thus seen to have a large commercial value under the existing conditions; and hence any such expedient, even if obtained gratuitously, can only be regarded as an auxiliary to some more effective plan.

With respect to the cost of executing the two different plans submitted, it is my opinion, that the first will prove much cheaper than the second, and that it will, therefore, be more advantageous for the railroad company to build a small tunnel or culvert, than to cut through their high embankment and construct the necessary abutments, bridge, dams and weirs involved in the second plan, provided that the question of water privilege before mentioned can be satisfactorily arranged. I would accordingly recommend, that if executive orders be issued based upon the *second* plan for securing relief, the parties affected by such orders be permitted to offer to the State Board of Health, within a reasonable period of time, an alternative plan for *drainage*, accompanied with proofs that all obstacles to the carrying into effect of such drainage have been removed; such alternative plan to be equivalent in its effects and results to the executive orders, which may rapidly be framed so as to admit thereof and to refer the ultimate decision as to the mode of execution to your Board.

Respectfully submitted,
EMIL KUICHLING,
Civil Engineer.

ROCHESTER, *September* 9, 1882.

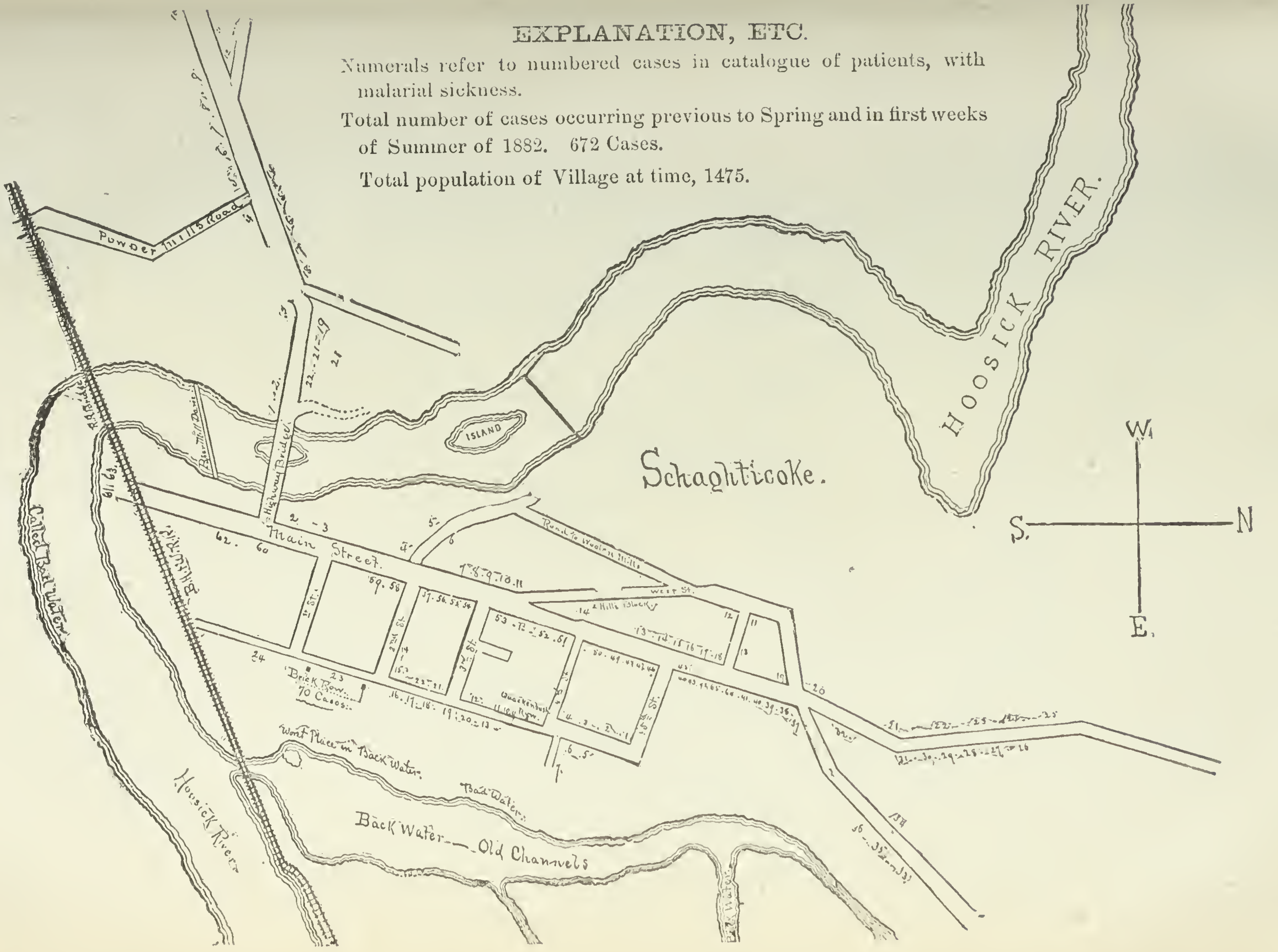
The result.—The first conclusions of the Board and the accumulated information in three successive years have resulted in a satisfactory agreement and acceptable specifications of work which the railroad corporation undertakes on its part to execute, and which the proprietor of the flatlands as well as the owners of the hydraulic franchises have accepted and undertaken to aid in view of the general result sought by the introduction and regulated discharge of an abundant flow of water that shall be introduced from the river at the eastern extremity of the existing chain of pools, all the parties concerned in giving effect to this much desired work have agreed that the inlet from the

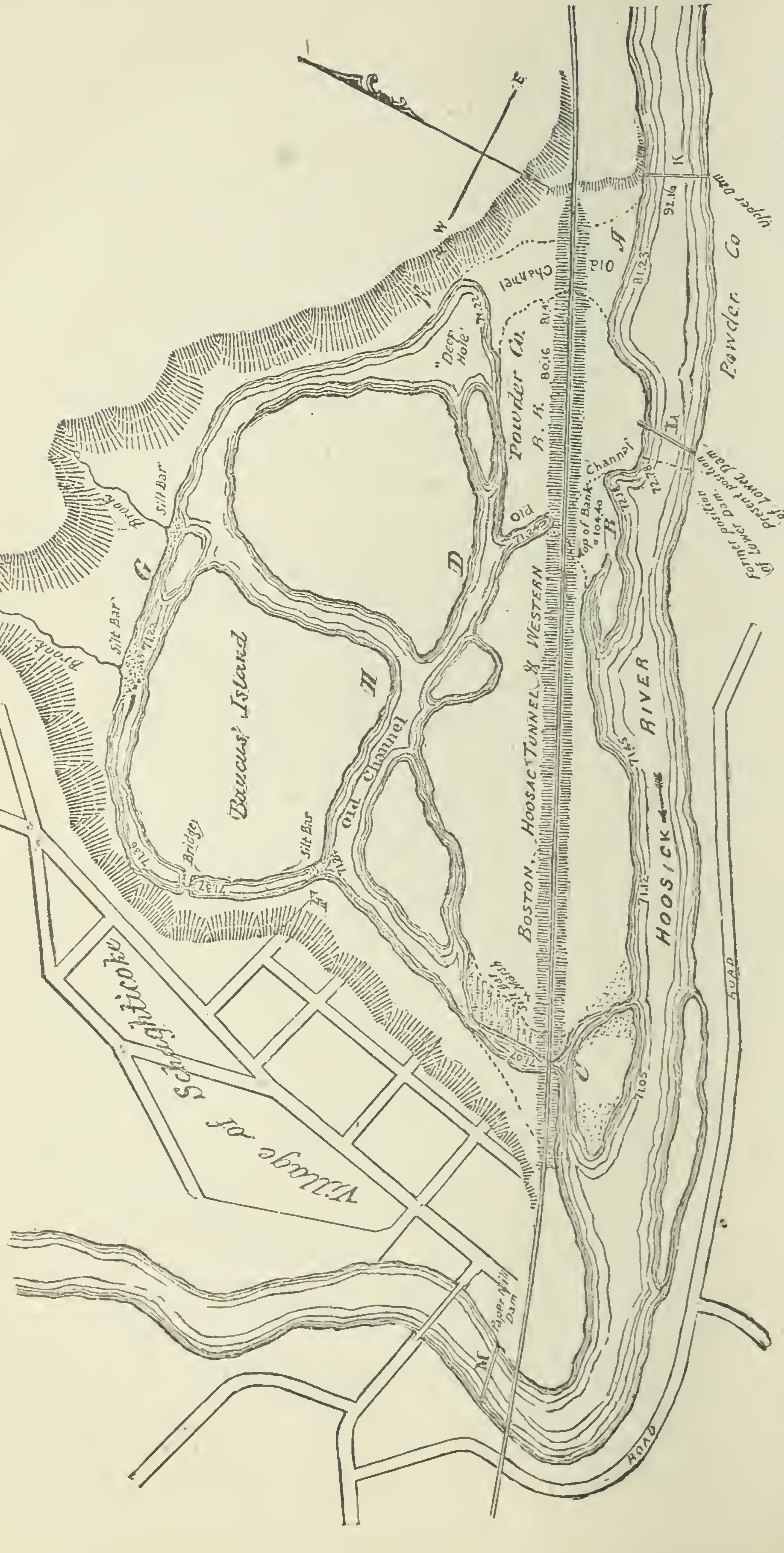
EXPLANATION, ETC.

Numerals refer to numbered cases in catalogue of patients, with malarial sickness.

Total number of cases occurring previous to Spring and in first weeks of Summer of 1882. 672 Cases.

Total population of Village at time, 1475.





Map Showing Stagnant-Water Channels of the Hoosic River at the Village of Schaghticoke, N. Y. Sept. 9 1882.

E. KUICHLING, Del.

river shall be made at a point sufficiently far eastward to give five and a half feet head for the inlet which will extend one hundred and thirty feet beneath the embankment; thus the recommendations made in the Board's final report as well as in conclusion second of its first report, are to be carried into full effect; and the inlet from the river is to command greater advantages than were in the last engineer's report, dated September 9, 1882. This increased advantage is by concessions made for the public welfare by the owners of the hydraulic franchise at the place of the artificial inlet.

(*b*) *Obstructions in the Hudson river at the village of Fort Edward.*—Another instance of obstruction in river channels is seen in the Hudson river at Fort Edward, in Washington county, where vast accumulations of saw-dust, are thrown into the current from numerous saw-mills above the village. These huge deposits of organic matter have gradually begun to decay, particularly in times of drought, and continue to emit intensely disagreeable odors and gases, for which reason they should be removed as a nuisance, and through which they are probably detrimental to the public health. In this case the necessity of providing carefully framed laws relating to the preservation of the purity of our public waters becomes apparent, and the attention of all who are interested in the welfare of this great Commonwealth is herewith directed to the devising of such general enactment as will protect and promote the public interests, and, at the same time, interfere as little as possible with the prosecution of private industries, or the constitutional privileges of every individual. The nature of the complaints preferred by the citizens of Fort Edward, together with an account of the present condition of the river at the village and a plan for securing relief, may readily be gathered from the series of documents presented elsewhere in this report.

(*c, d and e*) *Obstructions of ditches and streams in the towns of Schodack and Oneida Castle, and in the town of Perrinton, Monroe county.*—Among the numerous other complaints of malaria caused by obstructions in water-courses, and which have been investigated by the committee on drainage, sewerage and topography, the cases submitted by the health authorities of the villages of Schodack, in Rensselaer county, and Oneida Castle, in Oneida county, and of the town of Perrinton, in Monroe county, may prove of interest, as they can be selected as representatives of many similar cases where public nuisances on a comparatively small scale have been created and maintained by the negligence of powerful railroad corporations, and where direct methods of securing the abatement of such nuisances do not appear to be available or made use of by the local boards of health of small communities.

During the construction or improvement of any important line of railway, the subject of drainage usually receives very subordinate attention from the engineers, and the matter is generally left for adjustment until after the road is completed, when the engineers will have more time to properly study the various problems. The officers of the corporations, however, then commonly reduce expenses by dismissing most of the engineering employees who, from a residence in the locality, have become familiar with certain omitted drainage problems; and in the multiplicity of duties imposed upon those who may be retained, it is not surprising that many of the lesser cases become forgotten altogether, and are recalled to mind only after long-continued neglect has developed them into really dangerous nuisances. Upon presentation of complaint by the local authorities, the subject generally receives little attention from the company, and the evil is either only temporized with, or else remains untouched until it reaches more formidable proportions, when the patience of the community is exhausted and an appeal for aid and protection is made to the Governor. Such is commonly the history of those cases from which the particular instances here referred to have been selected as illustrations. The following papers are sufficient in each case to explain the difficulty and the corresponding simple remedy:

To His Excellency ALONZO B. CORNELL, *Governor of New York* :

The undersigned residents in the town of Schodack, in a district about one mile south of the village of Castleton, respectfully represent to you that their families are now suffering and have for a few years past been suffering from miasmatic sickness, caused by obstructions to the natural drainage of a small district which lies between the upland and an embankment upon which the Hudson River railroad is built, and having appealed in vain to the town authorities to take proceedings for the abatement of this evil, now respectfully petition you to require the State Board of Health to investigate these causes of suffering, and to report the same to you for such action as shall be justifiable under the law.

And your petitioners will ever pray.

(Signed) B. CLAPPER, ALFRED VAN WORMER,
J. D. SMITH, JOHN P. GROAT,
CHAS. H. SMITH, WM. PALMATEER,
STEPHEN CALLANAN, J. L. COONLEY,
J. E. COLLINS, PETER COONLEY.

SCHODACK, *November* 25, 1882.

Careful examination of the locality was made in company with an engineer, who reported as follows:

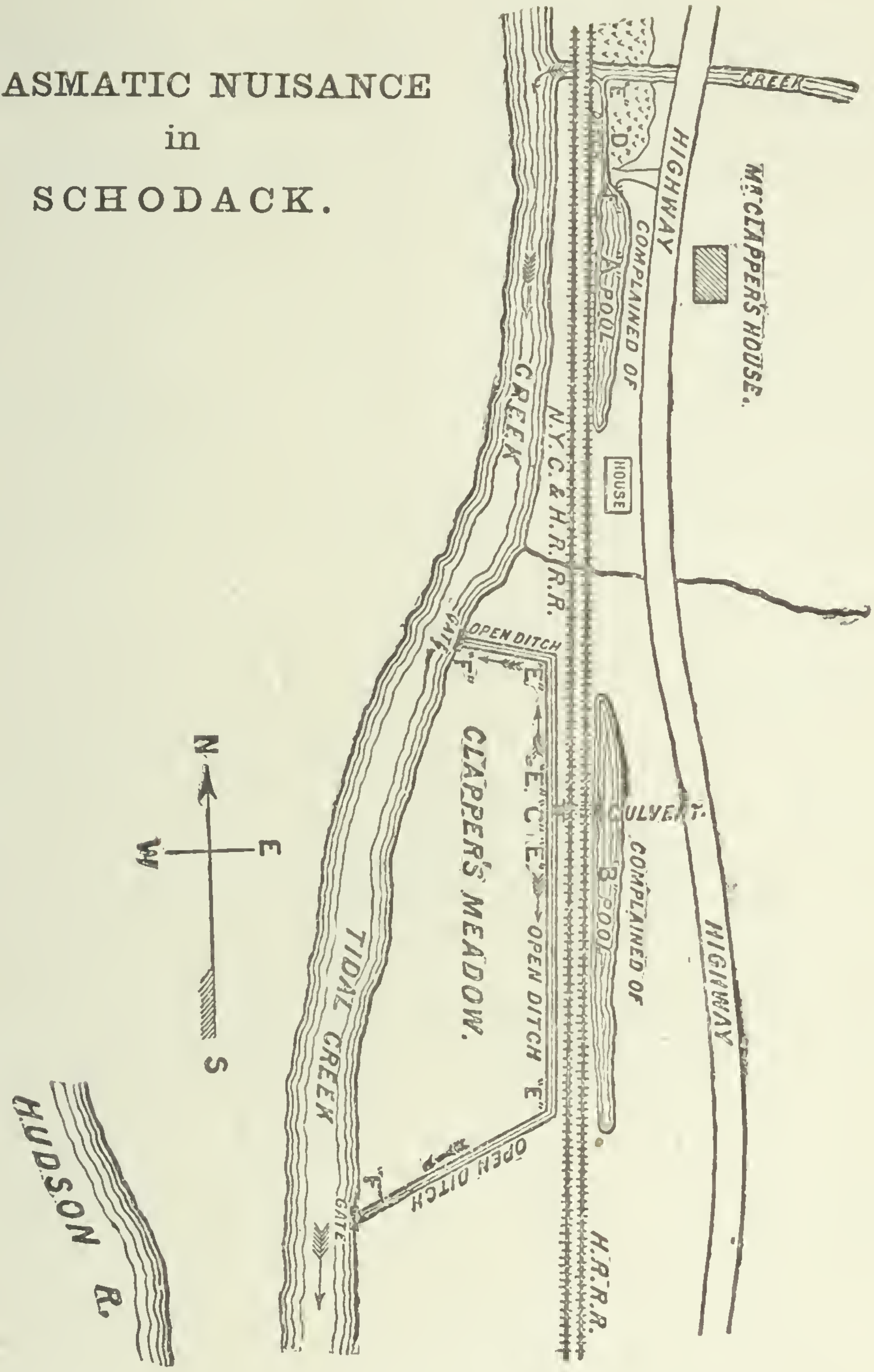
ALBANY, *November* 29, 1882.

To State Board of Health:

Agreeably to your request, and in company with yourself, I visited the locality complained of by Messrs. Clapper, Smith *et al.* at Schodack, one mile south of the village of Castleton, and append an explanatory sketch of the territory inspected, showing the topographical features of the drainage, and suggestions as to the remedy of the existing evils.

The pool marked "*A*" is immediately in front of Mr. Clapper's residence. It was originally an arm of the large creek shown west of the present railroad embankment, and the portion shown *blue* was isolated and left unprovided for, as regards the maintenance of a proper circulation, by means of the construction of this embankment and the neglect to maintain a proper open ditch to carry off the water. An open ditch was constructed by the railroad authorities, at one time, to facilitate an occasional flushing of this pool, at the period of high

MIASMATIC NUISANCE
in
SCHODACK.



"A". Pool undrained (ditch closed).

"B". Pool undrained (Culvert filled up at west side and closed).

"C" Culvert (needs lowering and extending westward to open ditch).

"D". Ditches from "E" to "F" needs opening.

LIBRARY
OF THE
UNIVERSITY OF ILLINOIS

tides, and to permit the water therein to escape at the ebb; this ditch is now closed, and at low tide, and for a long season, this pool has remained without an outlet. The ditch marked "D" extending from "E" to "F," should be opened and the pool filled up to a grade that will necessitate the flow of all the water through the ditch so opened to the creek at "D." The pool marked "B" was caused by the excavation of the earth at this point for the original construction of the railroad embankment. A culvert was placed, as shown at "C," to permit some of the water to escape to the open ditches on the west side of the railroad embankment. The embankment was subsequently widened, without extending the culvert. Rubble stone and cobble stones were thrown in, over which the earth filling was placed, and the culvert is now of little service. The culvert should be taken up, lowered and reconstructed. It should be extended to the open ditch shown at "C." The ditches, as shown, should be dug to such a depth as will permit the efflux of the water in the pool "B" at low tide, and proper gates should be maintained at the termini of the open ditches at the creek.

Respectfully submitted,
(Signed) WILLIAM S. EGERTON,
Civil Engineer.

STATE BOARD OF HEALTH OF NEW YORK,
December 5, 1882.

The following return was then made to the Governor:

His Excellency ALONZO B. CORNELL, *Governor of New York:*

SIR — The State Board of Health has ordered the annexed return to be made to you concerning the alleged nuisance in the town of Schodack, and situated a mile and upwards south of the village of Castleton.

The merits of the petition and complaint made by ten well-known citizens of Schodack, and which you referred to this Board for investigation, have been found worthy of the urgent request made by the complainants.

A committee of this Board, accompanied by a civil engineer, inspected the premises which were described to you in the petition, and the paper marked "A" is a brief and exact description of the nature and causes of the nuisance. The engineer's map attached to his report completes the explanation upon which this Board respectfully submits to you its conclusions thereon as follows:

Two natural water-courses which had their outfall into a creek or arm of the Hudson river, opposite the old "Beekman farm" and along its western front, have been cut off and obstructed, by an extensive embankment built by and for the Hudson River railroad. The northern water-course and outfall is obstructed by a transverse causeway or embankment, nearly opposite the present residence of Mr. B. Clapper, one of the complainants, and the pond or pool there caused and existing is undoubtedly a source of miasmatic fever from which Mr. Clapper's family suffers every summer and autumn. It is the pond marked "A," and as it admits of complete drainage by partial and graded filling in of its southern section, it should be so treated as to be drained off northward to and through the culvert bridge of the creek marked "D." The water-course to the southward of the old Beekman mansion being obstructed through its entire length against outflowing toward and into the Hudson river, and the culvert which was originally constructed opposite to the deepest portion of said water-course, which is now a stagnant pool, marked "B," on the engineer's map, and being like the pool marked "A," wholly upon and constituting part of the property of the New York Central and Hudson River railroad, should be made to connect with the Hudson river through its tidal creek at the south-west, by means of a culvert suitably enlarged and deepened at the place where the culvert once existed, and upon the engineer's map duly indicated at "C."

Ditches suitably constructed should be opened where they were some years ago made, marked upon the engineer's map, hereto annexed, as open ditches, extending to the two tide-gates, marked on the border of the creek by the word "gate." As the present beds of the two pools or stagnant ponds here mentioned were deepened by excavations for building up the embankment upon which the railroad was constructed, and as the entire area now covered by these stagnant ponds is the property of the railroad company, and cannot, by the complainants or other private citizens, be remedied or prevented, the said corporation is wholly responsible for their presence and continuance.

The conditions and evils herein described are unquestionably the causes of much sickness; and the pools and obstructed drainage, as described in the report and map of Engineer Egerton, herewith submitted, are nuisances, dangerous to life and detrimental to health, and therefore the aforesaid corporation should, without delay, remedy the said evils and prevent them in the manner specified in the report of the engineer, as here annexed.

Respectfully submitted,
[L. S.] E. M. MOORE, *President.*
ELISHA HARRIS, *Secretary.*

OBSTRUCTION AND NUISANCE IN ONEIDA CREEK.

A nuisance caused by the obstruction of Oneida creek was referred to, and investigated by, the committee.

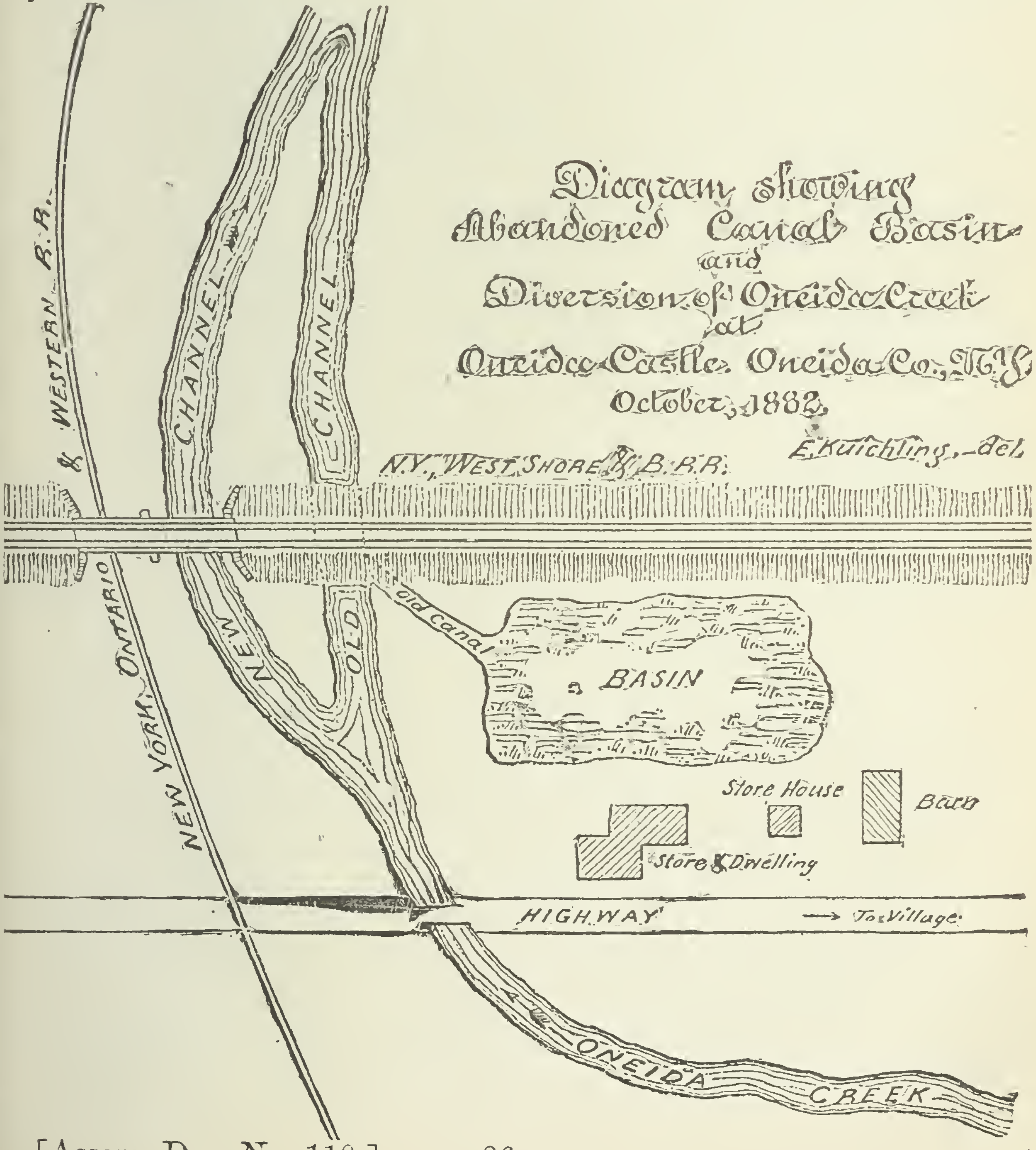
The following report of the engineer was received:

ROCHESTER, N. Y., *December* 1, 1882.

To the State Board of Health :

The undersigned begs leave to submit to you herewith the following results of his examinations, made by request of your Board on October 7, 1882,

On the diversion and obstruction of Oneida creek at the village of Oneida Castle, Oneida county, N. Y.— A few miles south of the village of Oneida is situated the small village of Oneida Castle, which was formerly the upper terminus of the Oneida Lake Navigation Company's system of canals, and where a relatively large artificial basin for the storage and loading of the flat-boats had been excavated in the lowlands adjoining Oneida creek. All of the privileges, easements and water-channels of the said navigation company, however, were afterward acquired by the State for canal purposes, and a portion of the system of canals built by said company is still used as a feeder for the Erie canal, while the remainder was gradually abandoned. In this latter portion, the old terminal basin referred to appears to have been included. From long neglect it has lost much of its original character, and its banks are now thickly overgrown with small trees, bushes and weeds. The short section of old canal which formerly connected it with the Oneida creek served both to drain the excavation when the stream was low, as well as to admit some of the water therefrom in times of flood. The basin, nevertheless, remained until recently in a condition that appeared to be satisfactory to the adjoining residents and land-owners, since no complaints about it were made. During the past summer, however, the excavation contained much stagnant water, from which offensive odors and malaria were emitted, thereby rendering it a public nuisance, and bringing it to the notice of your Board.



An examination of the locality on October 7, 1882, in company with Dr. H. W. Carpenter, the president of the board of trustees of Oneida, who took a most commendable interest in the matter, showed that the basin contained stagnant water to a depth of two or three feet, and was filled with reeds, rushes and several varieties of algae, some of the latter entirely covering the surface of the water in places and imparting to it a bright red, blue and green color. The decomposition of these aquatic plants during the heat of the summer was obviously the source of the disagreeable odor mentioned; and this fact, together with the presence of a considerable area of stagnant water, has made the complaint well founded.

The cause of the whole difficulty is the construction of a high and solid earthen embankment for the New York, West Shore and Buffalo railroad, directly across the old channel of the Oneida creek, immediately north of the basin, and the diversion of the creek into a new channel excavated somewhat westerly of the original one, but not as deep. In consequence of this action on the part of the railroad company, the mouth of the old canal leading from the basin to the original creek has been partially filled up by the earth of the embankment, as indicated upon the accompanying diagram; and as the new artificial channel of the creek has not been excavated to a depth sufficient to drain the basin, the water sets back into the latter either directly during floods, or by percolation when the stream has regained its usual state.

The object of this alteration of the creek channel was obviously to save to the railroad company the cost of an additional abutment for a bridge, since the alignment and grade of the new railway rendered it necessary to cross at a considerable elevation over the tracks of the New York, Ontario and Western railroad, which at this point runs northerly and near to the west bank of the creek. Accordingly, as the alteration was made by and for the interest of the said N. Y., W. S. & B. R. R. Co., and as the work was left by them in such condition as to cause a public nuisance upon the basin (which I am informed still remains the property of the State), by reason of insufficient depth for the new channel and the obstruction of the mouth of the old canal, it would appear that said company should deepen the new creek channel and remove the earthen obstruction from the outlet of the basin, so as to prevent the water of the creek in its ordinary low stages from setting back into the basin and also to permit drainage and flood waters to escape properly therefrom. Measures should also be taken by said company to prevent the water in the two portions of the original creek channel, north and south of the embankment, from becoming stagnant and thus creating further nuisance.

The details of the work to be performed in order to effect the abatement of the evil and the improvements specified in the foregoing are quite simple; but as the railroad company's engineers may know of valid reasons for preferring to drain the basin by constructing a small culvert under the present embankment, instead of by deepening the new creek channel, or to abate the nuisance by filling up the basin with fresh earth and then properly grading the same, the manner of securing relief may fairly be submitted by them to your board for approval. The refilling of the basin and old canal is doubtless the cheapest mode of procedure, and if properly done, the nuisance due to the basin alone will be effectually remedied; but there still remains the care of the two stagnant pools in the old channel on each side of the embankment, which have not yet given rise to complaint, but which will soon make their presence felt unless the stagnation of the water therein is prevented.

Respectfully submitted,
EMIL KUICHLING, C. E.

In relation to the alleged nuisances which have been brought to the official notice of the Board in the town of Perrinton, Monroe county, N. Y., and near the village of Fairport, the engineer, who was directed about the beginning of this month to examine into said matter, submits the following report: *

The accompanying documents were transmitted to me from Dr. E. Harris, Secretary of the State Board of Health, and consist of the following:

1st. A letter marked (A), from Anson L. Beardsley of Fairport, to Jesse B. Hannan, supervisor of the town of Perrinton, dated July 27, 1881, describing certain nuisances adjacent to the line of the N. Y. C. & H. R. R. R., and appealing to said supervisor to cause said nuisances to be abated.

2d. A memorial or petition marked (B), from forty-five inhabitants of the town of Perrinton, to Governor Cornell, requesting him to direct the State Board of Health to examine the nuisances in said town which are caused by the N. Y. C. & H. R. R. R. Co. upon and adjacent to their property. This petition was referred by the Governor on February 16, 1882, to the State Board of Health.

3d. A letter marked (C), from Jesse B. Hannan to Dr. E. Harris, referring to said nuisances and to certain improvements contemplated to be made by the N. Y. C. & H. R. R. Co. in the locality in question, and inclosing:

4th. An outline or sketch of said locality, marked (D), indicating the position of the alleged nuisances.

5th. A letter marked (E), from Prof. James T. Gardiner to Dr. E. Harris, recommending that the undersigned be directed to examine said nuisances and report upon the facts.

In accordance with the directions received, I notified the board of health of the town of Perrinton that I would be at their service in Fairport on March 8, 1882, but upon my arrival I found them unprepared to accompany me to the locality of which complaint had been made. The investigation was, therefore, postponed until the 15th inst., when the undersigned, in company with Messrs. Hannan, Murdoff, Briggs and Ramsdell, of the board of health, and Messrs. Beardsley, Titus and others, made as thorough an examination of the matter as circumstances permitted.

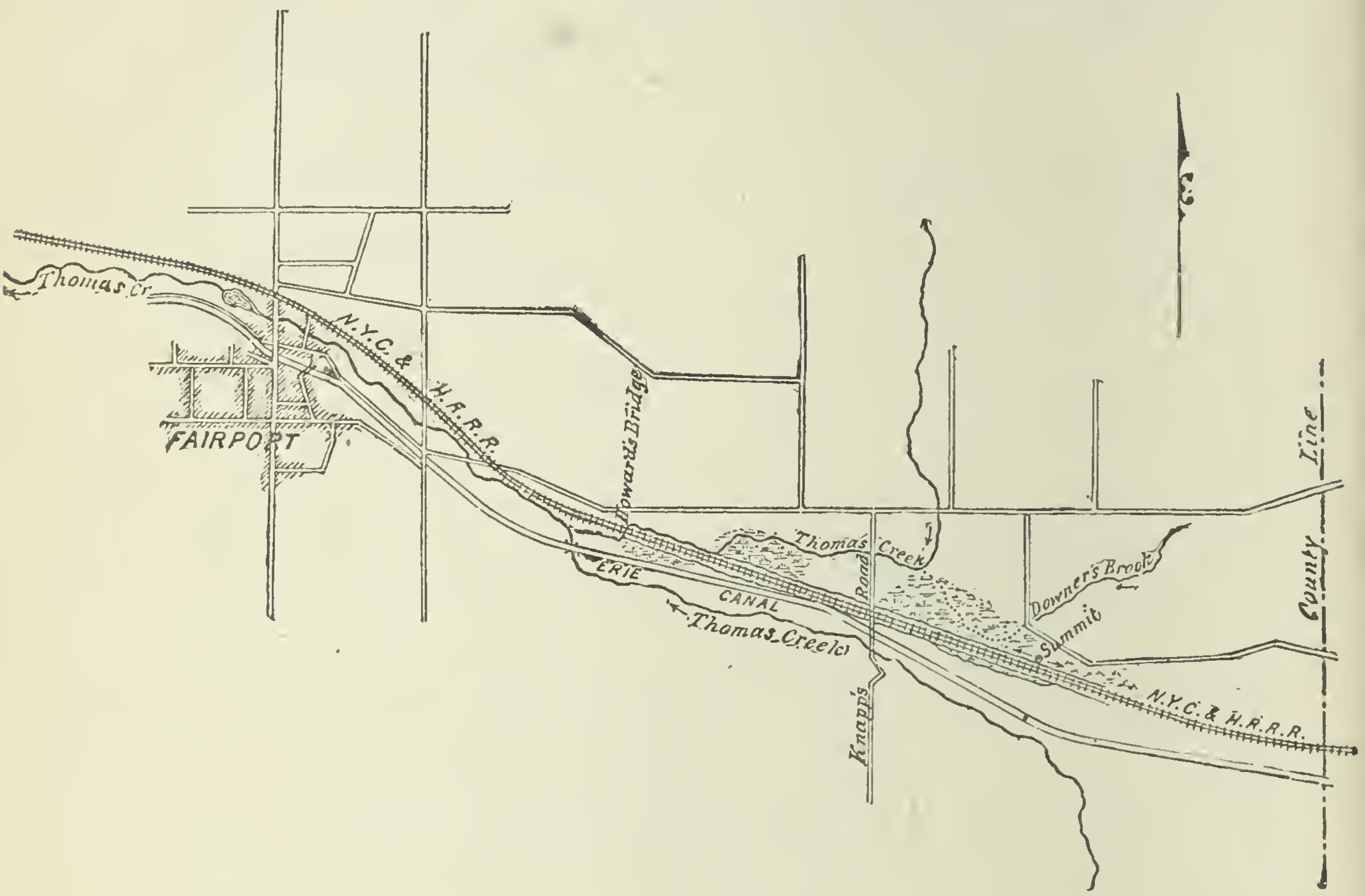
The complaints are, that the N. Y. C. & H. R. R. R. Co. has, by means of certain embankments upon the lands owned by it, obstructed certain ditches and natural water-courses in the town of Perrinton, in consequence of which the natural drainage has been ren-

---

* Papers not printed. The titles and references explain the objects of investigation and the engineer's relations to this Board's duties under section 10, chap. 322 of the Laws of 1880.

dered seriously defective, and wet lands created upon adjacent property, to such extent as to become detrimental to the public health.

Map showing a portion of the Town of Perrinton, Monroe Co., N. Y.



The locality alleged to have been injured by said obstructions was pointed out to me and defined as a comparatively narrow strip of land on each side of the tracks of said railroad company, and extending from a structure called Howard's bridge to a point about one and one-half miles easterly therefrom, as shown upon the appended diagram. In this area, which is quite flat from the banks of the Erie canal for a considerable distance to the north, there are seen several patches of wet or marshy land, one of them of considerable magnitude, besides occasional broad and shallow ditches upon the lands of the railroad company. The natural drainage of this territory is in a westerly direction through a stream called Thomas creek, which in turn discharges into Irondequoit creek, and thence into Irondequoit bay. Across this stretch of low ground the tracks of said railway are carried upon a continuous or solid earthen embankment, beginning at Howard's bridge and extending several miles easterly through the town of Perrinton, in Monroe county, into the adjacent town of Macedon, in Wayne county. About one mile west of the line between the said two counties there appears to be a slight ridge or summit in the low ground; and near this summit a small rivulet named Downer's brook, flows down in a south-westerly direction from a spring situated upon more elevated land, and causes a considerable area to become swampy. In the low ground there is apparently no well-defined channel for the waters of Downer's brook, which seem to be disbursed over this area, and which, from the statements made to me, have always heretofore rendered it wet; but, judging from the natural slope of the land, the brook probably finds its way into Thomas creek, as indicated by the dotted lines upon the appended sketch. No evidence was offered that the original course of the brook had been altered or obstructed in any manner by the railway company, or that the area of present swampy land at this point had ever been drained in a systematic way. The latter remark is also applicable to the other patches of marsh to which reference has already been made.

In the construction of the railway embankment, the company purchased narrow strips of land upon each side of their line, removed the earth in many places from said strips to the depth of a few feet and deposited it as embankment between the excavations. The latter being formed in flat territory originally defective with regard to drainage quickly became filled with water which the railway authorities endeavored to remove by grading the excavations or "borrow-pits" and forming ditches, so as to obtain an outfall for this water into Thomas creek at a point about one and four-tenths miles westerly of the summit. A series of levels made by me shows, however, that this grading of the ditches and borrow-pits has either been done imperfectly, or else that these artificial channels have become gradually obstructed in the course of time by the natural action of the elements. In consequence of this, a number of long and narrow pools of water are left standing in the excavations on each side of the embankment during the summer, and as no opportunity is afforded to this water to flow away, it becomes stagnant and gives rise to the growth of aquatic plants whose decay causes the malaria complained of.

These pools extend, with occasional interruptions, along each side of the embankment from the summit aforesaid to Howard's bridge, a distance of about one and four-tenths miles, in which there is a fall of from five and one-half feet to six feet. This declivity is ample to afford effective removal of the water now left standing in the excavations; and with a trifling expense, the artificial channels can be trimmed and graded in a satisfactory manner. To a request of this kind the railway company will doubtless render prompt compliance, and thereby abate the nuisance now existing upon their lands. Such work on the part of the railroad will, however, not procure very material relief for those lands which have for years past been wet and marshy; but its execution and subsequent maintenance will insure the ordinary surface drainage an efficient discharge.

In order to render the wet lands adjacent to the railway fit for profitable cultivation, it will be necessary either to deepen considerably the ditches on each side of the embankment, or else to deepen and regulate the channel of Thomas creek from the summit westerly to the village of Fairport for a distance of about two miles, in which a fall of ten or twelve feet can readily be obtained. This would, however, entail a large expense, and it is not clear from the evidence furnished me what part thereof should be borne by the company or the land-owners. In the determination of this question of the improvement of said lands by systematic drainage, a far more exhaustive examination than that which I have been directed to make will be required before the proportion of the whole expense of such improvement that the respective parties should bear can be rationally determined; and hence, before proceeding further in this matter, I will await your instructions.

With regard to the contemplated improvements on the part of the railway company to which reference was made in Supervisor Hannan's letter, marked C, to Dr. E. Harris, I would remark that Mr. Wm. Lush, resident engineer of the N. Y. C. & H. R. R. R., informed me that they would consist merely of a reduction of the grade of the railway in the vicinity of Fairport, and not in any change of the alignment.

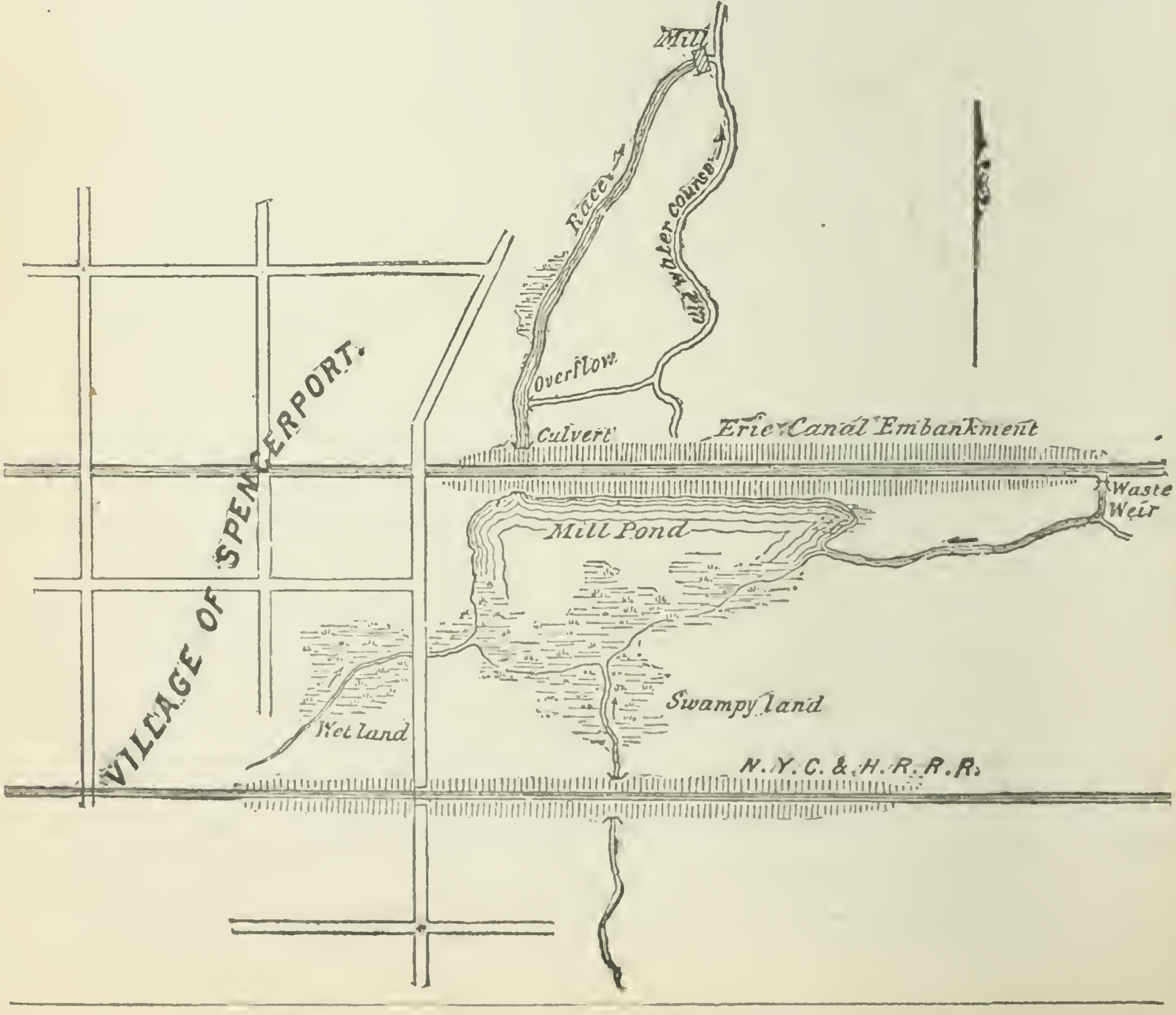
From Dr. C. M. Briggs, health officer of the town of Perrinton, I received to-day the inclosed medical statistics relating to the district under consideration.*

Trusting that in this report I have submitted to you the facts which you desired to learn, I have the honor to be

Respectfully yours,
EMIL KUICHLING,
Civil Engineer.

Mill-pond at Spencerport.— Another frequent source of complaint of malaria investigated by the committee is the fluctuation of the water surface and exposure of mud margins of mill-pondsin various localities throughout the State. As an example of this kind, we may refer to the allegations presented by the citizens of the village of Spencerport, in Monroe county, and also to the following report submitted to the committee :

"In the village of Spencerport, in the town of Ogden, and county of Monroe, the nuisance referred to in the inclosed memorial from the inhabitants consists of a large and quite shallow mill-pond, situated immediately south of the Erie canal embankment, and east of the principal business street of the village, as indicated upon the appended diagram. This pond lies in a small valley extending in a northerly



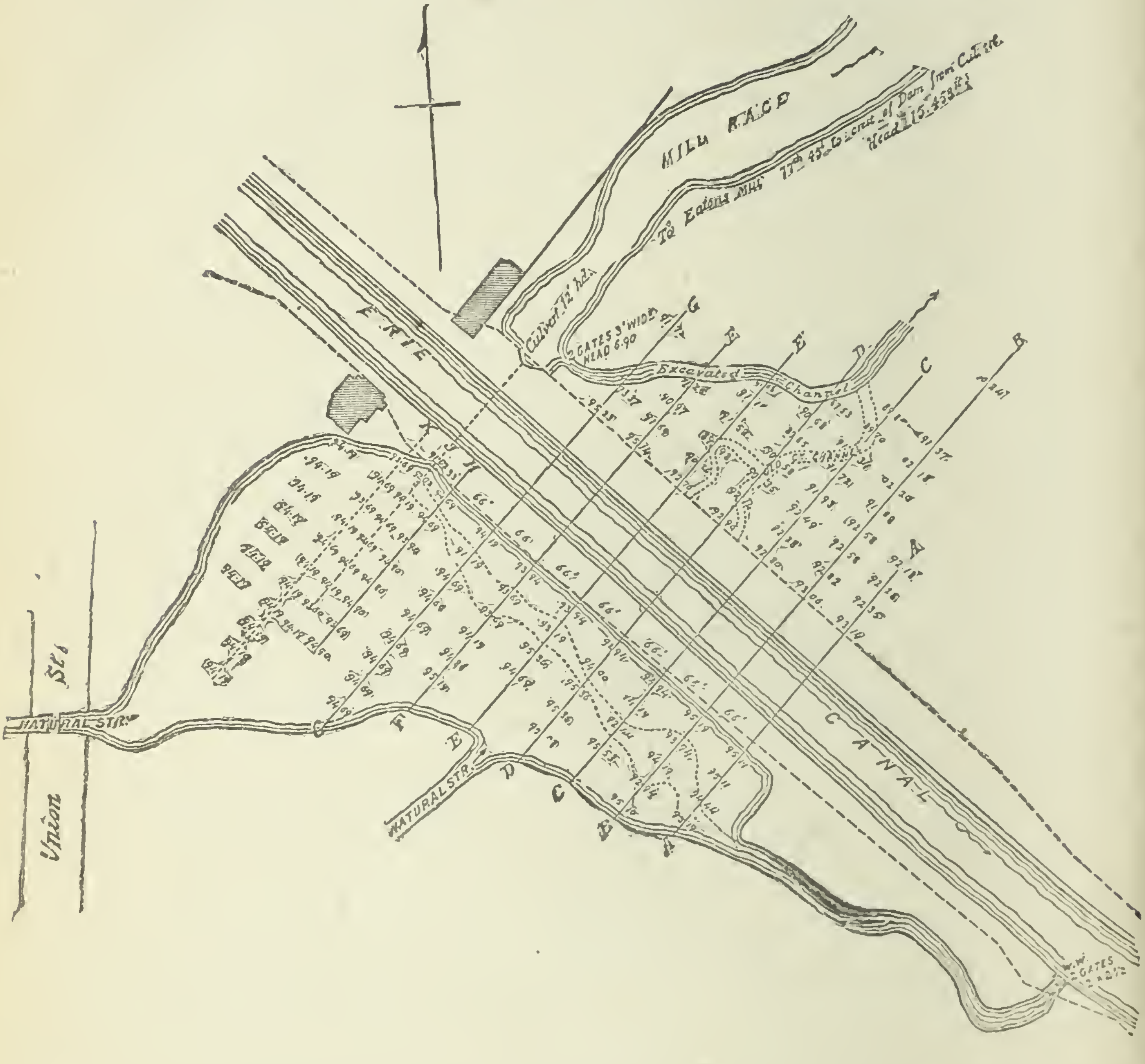
---

* See subsequent chapter on Prevalent Diseases. Fairport.

direction through the territory under consideration, and has, when full, an area of about four acres. The Erie canal crosses the valley upon an embankment of considerable height, and ample provision for the drainage coming from the south is afforded by a large stone culvert under the canal, the bottom of this culvert being about six and one-half feet below the water surface of the pond. To the north of the canal the valley has a considerable declivity, as the bed of the original water-course at the foot of the slope of the towing-path bank is about ten feet below the surface of said pond, and fifteen feet below at the mill-dam, which is located about one-quarter of a mile further north. The culvert under the canal appears to be located somewhat westerly of the original channel of the stream draining the valley, and close to the rather abrupt western bank, thereby facilitating the construction of the flume or race in which the water is conveyed to the mill. From the south and south-west, two small rivulets or natural water-courses empty into the pond, while from the east, the pond receives the discharge of the surplus water in the canal over a waste-weir only four feet wide. This waste-weir is also provided at the bottom with two wooden slide-gates, two feet wide and two and one-half feet high, through which there is considerable leakage. In consequence of the shallowness of the pond, the greater portion of its area is covered with a dense growth of aquatic plants, so that it resembles a stagnant swamp rather than a well-kept storage reservoir for the water required by the mill; and furthermore, when the pond is full the water sets back in the two small rivulets mentioned above, thereby causing the saturation and partial overflow of two adjacent areas of lowland, so that the aggregate swamp area can fairly be estimated at about six acres.

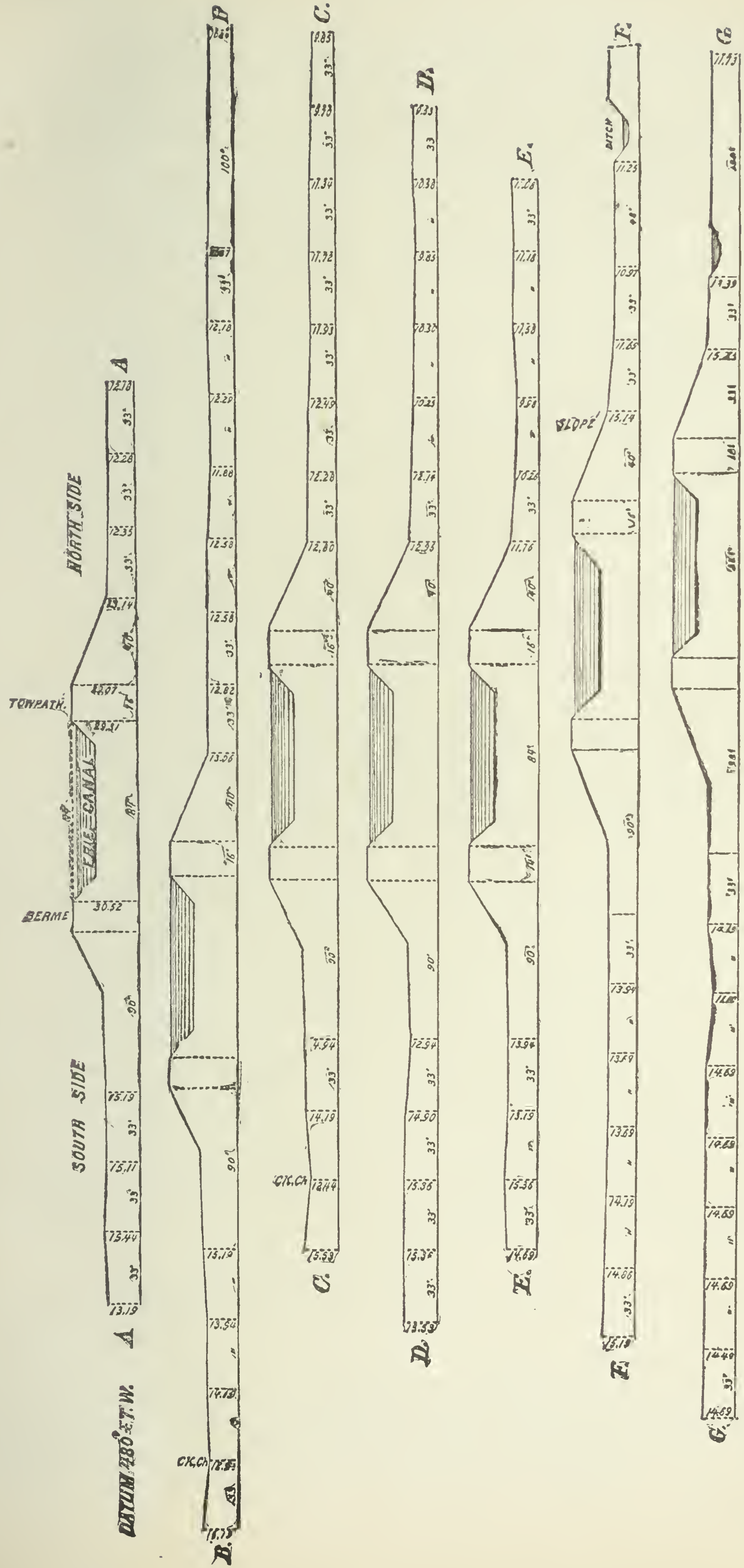
The flouring mill, which derives its water power from this pond, is at the present time the property of Mr. Joseph Eaton, of Spencerport, and is provided with four runs of stone, driven by a single turbine wheel thirty inches in diameter, working under fifteen feet head, and requiring, when running at its full capacity, about 1,300 cubic feet of water per minute. But on the 17th inst., when the undersigned examined the locality, the two natural water-courses were delivering into the pond only about twenty-five or thirty cubic feet of water per minute, while a very large volume of water was escaping from the waste-weir and supplying the pond, even though the surface of the canal was not within two or three inches of the high-water mark. As the natural drainage of the valley to the south does not appear to be sufficient to furnish an adequate supply of water to run the mill profitably, except during freshets or heavy rain, it is evident that the mill must depend for its water almost exclusively upon the overflow and leakage from the canal waste-weir; and when the supply from this source is not equal to the demand, it is allowed to accumulate in the pond until it becomes full, whereupon the machinery is set in motion and the pond drawn down until its storage capacity has been exhausted, after which it is again filled and the same process of drawing down is repeated. In this manner a large area of swamp mud is periodically exposed to the sun and atmosphere during seasons of drought; and when it is remembered that the lowering of the water surface in the pond to the extent of only one foot below high-water mark lays bare about three acres of

Map of Millpond at Spencerport, and of land opposite, North.



The numerals show elevations of pond-bottom and of ground-surface.—Datum = 400 ft. + above Tide-level.

A———A
B———B } etc. Levels, shown here, and in cross-sections on next page.
C———C



Cross-sections showing LEVELS of bottom of Millpond, Spencerport, and of land North and opposite.

the bottom, as stated to me by a number of residents, a fair notion of the unhealthy state of the locality can readily be formed.

From the evidence furnished me, it furthermore appears that the mill privilege in question was established in 1833, or several years after the completion of the original Erie canal, and that a large spillway from said canal had been constructed near the site of the present waste-weir; but no evidence or record of any contract or agreement on the part of the canal authorities to supply any definite amount of water to the owner of the mill privilege was presented, or can be found in the canal engineer's office in this city. I am, therefore, led to the conclusion, that if the overflow and leakage from the existing waste-weir were stopped, the water-power of the mill would practically cease except during freshets and times of heavy rain-fall; and also that the true solution of the difficulty lies in the total obliteration of this water privilege and the restoration of the original water-courses or its equivalent. As the present culvert is amply adequate, both in dimensions and depth, to discharge the surface drainage coming from the south, together with such water as may find its way through the present waste-weir from the canal, the destruction of the water-power of the mill will quickly cause the obnoxious pond to disappear, and will enable the owners of the swampy land to convert it, with little expense, into rich and wholesome soil. It should be remarked, also, that another plan for abating the nuisance was fully discussed and considered before arriving at the above conclusion. This plan involves the excavation of wide and deep trenches or channels through the swampy area, and the depositing of the mud and muck thus excavated upon the adjacent bottom, thereby raising the latter a little above the water surface, and preserving the mill privilege. I am, however, of the opinion that such a proceeding would not only be injurious to the health of the residents on account of the malaria which would ensue from the exposure of a large amount of this swamp mud to the air, but that it would also soon prove unsatisfactory to all parties on account of the greater expense, as the whole swampy area would require a thick coating of fresh, clayey earth to check and prevent the exhalations from the decomposition of the organic matter contained in the mud. Suitable material for such an artificial elevation of the present surface of the swamp is not here within convenient reach; and, therefore, it appears to me that the most feasible expedient for abating the nuisance will be to purchase the water-privilege from the owner and then to destroy it. The cost of this plan I have not been able to determine satisfactorily, since the value of the mill-privilege is entirely dependent upon the production of a contract or agreement on the part of the State to furnish a definite amount of water for power from the Erie canal.

Respectfully submitted,
EMIL KUICHLING,
Civil Engineer.

The question of the proper maintenance of such mill-ponds is a large and growing one, since many of these reservoirs of water-power, which were originally deep and salubrious, have gradually become silted up by the deposit of earthy matter carried down by freshets in the streams; and as the water became shallow, it afforded opportunity for the growth of algae, whose decay in the summer gives rise to extremely offensive odors. Many of the small streams which furnish water-power have furthermore become defiled by sewage from various sources above the ponds or reservoirs, and thus the latter are frequently merely settling tanks for contaminated water. The presence of such comparatively large business of diluted sewage in the midst of a community cannot fail to become sources of disease, and the improvement of their sanitary condition is strongly urged upon all health officers.

*Final results at Spencerport.**— The Assembly of the State having directed this Board by resolution to examine into the nature and causes of the alleged nuisance in Spencerport, the Board directed Engineer Kuichling to proceed with such preliminary surveys as would enable it to take and use the testimony of the inhabitants in relation to this subject. The diagrams upon pages here following illustrate the result of the survey thus ordered and the subject-matter of the annexed report. The village board and public-spirited citizens promised to follow up these conclusions to their legitimate results.

STATE BOARD OF HEALTH,
March 5, 1883.

CONCLUSIONS AND RECOMMENDATIONS TRANSMITTED TO THE SUPERINTENDENT OF PUBLIC WORKS IN ACCORDANCE WITH THE RESOLUTION OF THE LEGISLATURE, DATED FEBRUARY 21, 1883.

1. That the mill-pond is a nuisance, dangerous to life and detrimental to health, owing to the fluctuation of the water surface and consequent exposure of mud margins of great breadth, resulting from the nearly level bottom of said pond; but we find none of this upon land belonging to the State.
2. The mill privilege has come to depend for its water supply chiefly upon the leakage through and over the existing waste-gate on the canal at the point indicated on the maps.
3. And that the responsibility of the State consists in thus contributing essentially to the maintenance of the nuisance.
4. There is no evidence whatever of any obligation on the part of the State to contribute in any manner to the maintenance of the mill privilege, and the canal has no other lawful and necessary relation to sustain to said mill privilege, except to keep open the culvert by which the stream flowing from the southward shall have free outflow to the northward of the canal.
5. It, therefore, follows that it is the duty of the State to cease its contribution to the nuisance by either removing the existing struc-

---

*The Board received the following order from the Legislature on the 21st of February, 1883:

Resolved, That the State Board of Health be, and are hereby, requested, to examine the pond of water on the south side of the Erie canal at Spencerport, Monroe county, claimed to be a nuisance created by water from the canal; to take such evidence and swear such witnesses as shall be produced before them, and make a report with the evidence taken before them to the State Superintendent of Public Works, within fifteen days from the passage of this resolution. By order of the Assembly,

(Signed) WALTER H. BUNN, *Clerk.*

tures for waste or overflow to some other point, or by altering it, so that it shall no longer act as a spill-way, although it may be retained as a waste-gate, for use in extraordinary emergencies for canal purposes.

6. If it should be so retained, it becomes absolutely necessary that it should be perfectly water tight, strictly closed and under careful supervision, to prevent any interference therewith.

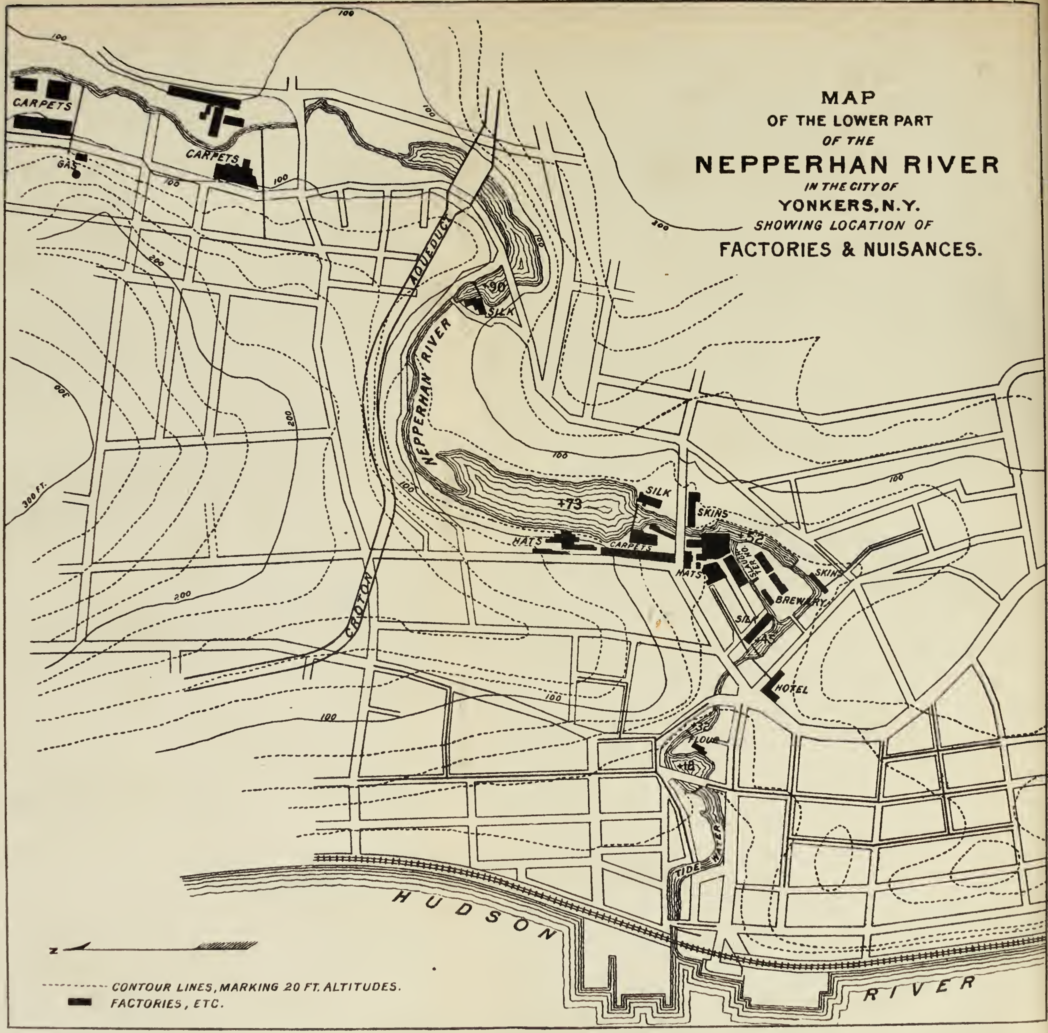
(Signed) JAMES T. GARDINER,
Chairman.
EDWARD M. MOORE,
President,
ERASTUS BROOKS,
JAMES G. HUNT,
ELISHA HARRIS, *Secretary.*

Committee on Drainage, Sewerage and Topography, acting for the State Board of Health, by authority under section 4 *of chapter* 322 *of Laws of* 1880, *and as ordered by the Board at special meeting held February* 24, 1883.

III. *Defiled Natural and Artificial Water-Courses and Miasmatic Diseases in Erie, Ontario, Madison, Oneida, Broome, Columbia and Westchester counties.*

The pollution by sewage of the water in canals, streams and lakes has also engaged the attention of the committee in a large number of cases during the past year, and abundant evidence has been collected to convince all who are versed in sanitary science that this subject should receive the most careful attention of the Legislature for the provision of definite laws prohibiting or restricting the disposal of raw sewage into public waters. Reference to some of the cases investigated more thoroughly last year has already been made in the second annual report on pages 24–31, and means of relief by proper legislation were therein amply discussed and recommended, so that any further remarks or suggestions relating to laws now become unnecessary.

(*a*) *Pollution of the Main and Hamburg canal in Buffalo.*— The most important of these cases is the pollution of the Main and Hamburg canal, in the city of Buffalo, by the discharge therein of the raw sewage from a large portion of the city, together with the organic unsalable refuse of several grape, sugar and starch-works. The magnitude of this defilement is enormous, and its pernicious effects have already extended themselves by means of the Erie canal and Tonawanda creek to the village of Tonawanda and the city of Lockport. A large amount of testimony was taken last August at Buffalo, Lockport and Tonawanda by the committee in relation to the character and amount of putrescent organic matter that is daily thrown into the Hamburg and Erie canals at the former place, and the conclusion was reached that a cessation of this method of sewage disposal was absolutely and immediately necessary. The principal difficulty was found to be due to the glutenous refuse of the glucose and starch factories, which was discharged partly in suspension and partly in solution directly into the



THIRD ANNUAL REPORT STATE BOARD OF HEALTH OF N.Y.

canals, and which, by its subsequent decomposition, caused the intolerable odor known throughout the entire vicinity as the "Hamburg smell." Careful chemical investigation, however, revealed that means for retaining the gluten from the liquid wastes of these establishments were both available and practicable, and the proprietors of the said works were accordingly urged to resort to such measures as will insure purification before allowing the liquid wastes to flow into the canals.

It should also be mentioned, that the city of Buffalo has in contemplation the construction of a suitable intercepting sewer along or near to the line of the Hamburg and Erie canals, which will, upon its completion, prevent the entrance of sewage into said canals, except in times of heavy rain-fall, when it will become so diluted as to be practically innocuous.

(*b*) *Nuisance at Yonkers. Investigation of the pollution of the Nepperhan river by mill-wastes and sewage.*— The return which this Board made to the appeals from citizens of Yonkers in the two previous years had certified to the Governor, as well as to the petitioners, that no action would be taken by the State until the city authorities of Yonkers "shall have endeavored to secure obedience to their own sanitary ordinances." * Nevertheless, the board of health in this city, having found it impossible to incite the very authorities that appointed them, and the sewer and improvement commissioners of the city, to take any action whatsoever that would be adequate to the relief and prevention of the Nepperhan nuisances, appealed urgently to his Excellency, Governor Cornell, as shown in the annexed copy of that document, and thereupon the State Board, under the Governor's order and special directions, given August 9, 1882, proceeded to the thorough investigation, with results as here briefly recited.

To Hon. Alonzo B. Cornell, *Governor:*

Sir — The State Board of Health has the honor to return to you its reply to the papers you referred to it from the Board of Health of the city of Yonkers on the 25th of July, and to report to you as follows:

The memorial of the board of health of Yonkers, as addressed to you on the 15th of July, states that the course of the Nepperhan river through that city is obstructed and diverted by dams at various places; that said dams have caused much fermenting organic matter to be deposited in the several ponds within that city, and that deleterious emanations result therefrom.

As requested by that board and directed by you, the State Board of Health has carefully examined the said nuisance and its causes, and will in this communication submit recommendations for the abatement and prevention of the evils here described.

With a population now exceeding 20,000, with a long extent of frontage on the Hudson river, and a wide slope ascending eastward to the summit of a ridge nearly 300 feet in height, the city of Yonkers appears a city of residences; yet behind its summit ridge, and extending for more than a mile and a half upon the stream known as the Nepperhan river, which makes its way from north to south and southwestward, where it enters into the Hudson, Yonkers is found to be a manufacturing city, with at least two-thirds of its population engaged in, or dependent upon, the factories.

---

* See First Annual Report, page 190.

The Nepperhan is the chief source of the water supply by which the woolen, silk and felt fabrics are washed in the various processes of making up the products of these factories. Beside these uses of the water for cleansing, washing, etc., the average hydraulic value or force of the stream itself, in its flow through the city, is estimated at nearly 300 horse-power. At present 220 of this estimated 300 horse-power is in use in the descent of the river through one mile and a quarter of its course. The Nepperhan reaches the first factory (Moquet carpets) at a point nearly one and three-quarter miles from the Hudson, in a state of purity fit for domestic uses. After serving the purpose or purposes required at that factory for the extensive washing and cleansing of wool and yarn, it reaches the next factory deeply colored, but still comparatively free from defilement. There, and from that point onward toward the Hudson river, the organic waste matters which are cast into it become more and more conspicuous and offensive. What these factories are, and what are the waste-matters which they discharge into the Nepperhan, will presently be described in a special statement by J. J. R. Croes, C. E., who attended this Board's committee in its inspections and hearings at Yonkers. Suffice it here to state, that from the three carpet factories, which are owned and conducted by one firm, 6,500 pounds of wool are daily scoured and washed; that in this process alone 2,600 pounds of loose matters are removed and discharged into the river; and that beside this upwards of 3,000 factory employés deposit their excremental outflowings in the stream.

The next factory, down stream, in the manufacture of felt and hats, discharges about 2,200 pounds of solid organic waste into the stream. Vast quantities of soda, ash-soap and oily matter, etc., are also discharged from the factories here named.

Further onward, down stream, are the Yonkers gas-works, silk factories, hat factories, brewery, morocco factory, a slaughter-house, and various mills pouring their waste matters into the stream. All the stables of the Nepperhan district, the dwelling-houses and sewers which lie within the limits of the water-shed of the Nepperhan, within city limits, discharge ultimately into this much-defiled natural water-course. About 6,000 people are now employed in the factories and shops in this valley within city limits, and upward of 5,000 people inhabiting the dwellings make their ultimate discharge of drainage and sewerage into some point along the Nepperhan banks.

As shown in Engineer Croes' report, which the undersigned regard as quite within the limit of correct statement, there must be more than ten tons of excremental matters from the people, and probably little less than that of waste organic matter from the factories and other sources discharging into the Nepperhan within the city limits.

The capitalized wealth of Yonkers is chiefly in its manufactories. These depend greatly upon the water of the Nepperhan. The river descends over six dams in succession within the city limits, falling one hundred feet in all before reaching tide level. In its last-named "level" this river has become a vast cess-pool, one-fourth of a mile in length, and it is there reeking with stenches at all seasons of the year, except during the brief periods of great floods.

The interest and undoubtedly the vested rights of the owners and lessees of the franchises of the river within city limits will soon, and, in the judgment of the undersigned, they now require that the entire length and width of the stream and both its banks shall be preserved and protected from the nuisances which now choke and defile it. Yet it is only recently that the attention of the manufacturers of fine fabrics, namely, the carpets, felts, yarns and silks, have had their attention sharply and urgently called to this fact by the evils experienced in their long line of products. This interest of theirs should render it natural and easy for them to accept and enforce the sanitary requirements which, in the judgment of the undersigned, must be laid upon them to prevent the pollution of their much-used mill-stream.

Hitherto the Nepperhan has served as the chief channel of drainage and sewerage for the city of Yonkers. Some of the newly-constructed sewers empty into it, while the old ditches and common house-drains for half the city find their way into it. The dwellings, stores, shops and factories alike for a mile and a half, on either side, discharge their excremental and waste matters into it (with only two notable exceptions, as pointed out in Engineer Croes' report). Even where dwellings and stores near the banks have been ordered to make sewer connections, they have in most instances continued to discharge all their sewage and excremental matters directly into the Nepperhan; while all obediently made sewer connections, they remained unused.

It appears in the evidence obtained by the undersigned that the banks and channel of this narrow stream have remained unpoliced and utterly filthy from the time the village became a city; yet ordinances of the common council and sanitary regulations, definite and apparently sufficient, have been communicated and promulgated year after year, and are now nominally in force in the city. Hence, it appears that the facilities and temptations for the continued and general violation of such ordinances and regulations, and the immunity of the offenders from the penalties are such as to warrant the municipal board of health in appealing to the Governor and the State Board.

The detailed evidence on this subject, and concerning the share which each factory and business, and each class of the community has in the total nuisance which exists, is set forth in the minutes of the hearing by the State Board, and in the report of Engineer Croes as submitted herewith. On behalf of the State Board the following conclusions and recommendations are respectfully submitted:

CONCLUSIONS.

1. The Nepperhan river, within the city of Yonkers, has become a nuisance dangerous to life and detrimental to the public health, and that from High street to the Hudson river, a distance of one and one-half miles, the causes which make the river and its banks a nuisance should be controlled by absolute police authority, and whatever engineering works are necessary to make such sanitary policing effective.

2. That the first requirement in devising means for such sanitary improvement and successful policing will necessarily be the adoption of a plan of adequate intercepting sewers to restrain and conduct away all the sewage matter and organic waste materials of every kind which otherwise will be discharged into the Nepperhan.

3. That the Nepperhan river is a natural mill-stream, the value and importance of which to the industries and wealth of Yonkers requires that it should be preserved and protected for industrial and manufacturing purposes, and that to this end, its channel and banks must be protected against the pollutions which now, or will in future, make it a nuisance.

4. That inasmuch as a board of water commissioners is at present, under authority of the Legislature, in charge of the preparation of the plans for a sewer system for the city of Yonkers, this Board should proceed without delay to perfect its plans for safe and effectual sewerage as is here referred to; and, inasmuch as the common council of said city is required to pass upon the plans and authorize and approve measures for constructing all sewers in said city, said common council should promptly pass ordinances for the construction of suitable sewers.

5. Any needless delay in perfecting and ordering sewers as here referred to will be a wrong to the people of Yonkers and a danger to the public health of the State, inasmuch as the region of the Nepperhan described in this report has become a *fever-nest*, which at any time may be a center of dangerous disease that may extend to other communities as well as to all parts of Yonkers.

6. That to facilitate the form of recommendations and orders, to secure and expedite the sanitary and public works now demanded for the protection of the public health at Yonkers, the following among other causes of evil which have herein been defined and declared to be a nuisance in and about the Nepperhan are separately stated.

(*a*) The excremental and other sewage outflow from 6,000 to 7,500 people residing or having employment near the Nepperhan within the city should be restrained from being discharged into the Nepperhan at any place.

(*b*) All sewage and other waste matters from the factories (thirteen in number) on the banks of this stream within the city, particularly the washings of waste, greasy, albuminous and all organic matters, from the wool, the skins, dye-stuffs, fabrics, etc., etc., used at the factories, also all outflow from slaughter-houses and the brewery, should be prevented from being discharged into this stream.

(*c*) That for this purpose it seems necessary that all persons, proprietors, officers and corporations responsible for any of the foregoing causes of pollution of the Nepperhan should be officially directed wholly to cease from and prevent such polluted discharges into this stream, and that, whether by tanks and reservoirs with means for precipitation and disinfection, or in part for particular factory wastes, the adoption of methods of precipitation, disinfection and filtration, or by a special system of sewerage, orders from the proper authority to protect the Nepperhan against further defilement should be in full force and effect within the briefest practicable period. In the judgment of the undersigned such a period need not be longer than six weeks from the presentation of this report, and it should be in full force until the city system of intercepting sewers shall be completed, and until the city shall have required such sewers to protect the Nepperhan against all sources of pollution.

RECOMMENDATION.

That the mayor of the city of Yonkers, the water commissioners of said city, and the board of health be furnished with a copy of these conclusions, and be advised and ordered, so far as the Governor has authority, that full effect be given to these said conclusions of the State Board of Health, through and by means of authority vested in the municipal government of the city of Yonkers.

Further, that all owners, officers and corporations which now in any manner contribute and add to the causes of pollution of the Nepperhan which renders it a nuisance, namely, those which are described in this report by the State Board of Health and its engineer, shall be peremptorily forbidden, and by police force and by condign penalties be deterred and wholly prevented from causing, or in any manner contributing to, the pollution of the Nepperhan.

Respectfully submitted,
By order of the State Board of Health,
JAMES T. GARDINER, *Chairman,*
EDWARD M. MOORE, *President,*
[L. S.] ERASTUS BROOKS,
JAMES G. HUNT,
ELISHA HARRIS, *Secretary,*
Standing Committee on Drainage, Sewage and Topogrophy.

ALBANY, *September* 8, 1882.

The following is the report of Engineer J. J. R. Croes:

NEW YORK, *September* 4, 1882.

To the State Board of Health, New York :

I have the honor to report the result of examinations of the Nepperhan river, in the city of Yonkers, made by your order.

The Nepperhan or Saw-Mill river, draining about twenty-five square miles of hilly. sparsely-settled country, mainly occupied by timber and grazing-lands, crosses the northerly line of the old village of Yonkers, about two miles from the Hudson river, by the course of the stream, and 100 feet above tide-water.

At this point the water in the stream is free from impurities, slightly hard from the character of the soil through which it flows, and limpid when the stream is low.

From this point to the Hudson river it flows through a narrow valley, the summits of the hills bounding which are about 3,000 feet apart, and from 100 to 200 feet above the stream. On the slopes draining into the stream is the most densely populated portion of the city of Yonkers.

There are now built and discharging directly into the stream, sewers of an aggregate length of about 13,000 feet, estimated to carry the house-wastes of 3,000 people.

There are, as nearly as can be ascertained, 100 houses, the privies of which are directly over the stream or its banks, and there are ten manufacturing establishments which discharge directly into the stream the excreta of 3,000 employés.

There are, therefore, deposited in the stream, daily, about eight tons of human excreta.

The quantity and character of the factory wastes entering the stream have been examined by me. In the three carpet mills of Alexander Smith's Sons, there are scoured daily about 6,500 pounds of raw wools, from which about 2,600 pounds of waste matter are removed. In the three hat factories of Baldwin & Flagg, Waring & Belknap, and H. W. Flagg, there are scoured daily 3,500 pounds of wool, sixty-three per cent of which is waste, making about 2,200 pounds put into the stream. The fine Cape of Good Hope and California wools used in hat-making contain a much larger percentage of sand than the coarser wools used in carpet manufacture.

The "wool suds," consisting of soap, alkalies, grease and sand, with the water used in washing, are emptied into the stream twice a day. In the carpet-works the wool is then carded and spun. In this operation about seven per cent of oil is added to it. The yarn is then scoured with soap and soda-ash, losing twelve per cent of its weight, chiefly oil and flock. About 12,000 pounds of this yarn is scoured daily, turning into the stream 1,500 pounds of solid matter.

The yarn is then bleached and rinsed in clean water, which carries off a certain portion of sulphuric acid. Some of the yarn is printed and then rinsed, which carries off the loose dye-stuff and flour. The amount is small, but the effluent discolors the stream. The rest of the yarn is dyed and rinsed. The rinsing-water is very much discolored, but contains very little that is in any way detrimental to health.

The wools used for hat manufacture are carded with oil, fulled and then washed. The effluent water is considerable in amount and contains a good deal of soap. After dyeing the loose dye in the black hats is washed out. The dye kettles are emptied into the stream about once a month, when black hats are manufactured, but for fancy colors, about one-half cubic foot of discolored water is emptied into the stream for each pound of wool dyed.

The total amount of refuse other than sewage, which is discharged from the factories in a form liable to decomposition and to become offensive, is probably not more than three tons, or three-eighths as much as the human excrement which is deposited in the stream.

This estimate includes, in addition to the above-named woolen mills, the refuse from the Westchester gas-works, the washings from Underhill's brewery, the dry liquors from Skinner's silk mills, and Kitteringham's morocco factory, and the waste from Shott's slaughter-house. The polluting matter which enters the stream is, to a large extent, retained and deposited on the bottoms and margins of six ponds formed by dams across the stream, and that which passes through them enters a tidal basin a quarter of a mile long, extending from the Hudson river to Warburton avenue. These ponds, each originally about fifteen feet deep at the lower ends, have become nearly filled with deposit from the filth put into them, and the wash from the hill-sides when drawn down one and one-half or two feet, large areas of mud flats are exposed, which are fringed with filth and garbage from the privies and houses along their banks. During the greater parts of two months during the year, the natural flow of the stream is not sufficient to supply the demand for water for industrial purposes, and the surface of the ponds is lowered from one to two feet during the day, the upper ponds only filling up at night. The filth on the banks consequently remains there, rotting and stinking.

The only possible method of preventing this stream from being a nuisance is the exclusion of polluting matters from its channel. The fluctuations of its natural flow are so great that no form of channel can be devised which will suffice to carry off its maximum flow and at the same time be kept clean with its maximum flow when receiving the sewage of twelve or fifteen thousand people, as it will be in a few years. The records of similar streams show that there may be expected in the Nepperhan freshets discharging at the rate 1,700,000,000 gallons a day, and on the other hand, seasons when for several days its flow will not exceed 600,000 gallons a day.

To construct a masonry channel, either open or closed, of the proper capacity would be enormously expensive. The presence of such a channel would not obviate the necessity for sewers in the adjacent streets. To make those sewers large enough to carry off all pollution which would otherwise reach the stream will cost not more than one-third of the expense of making the stream available for the purpose, and will be much more effective. The only reasonable plan for abating the nuisance is therefore the construction of intercepting sewers in the adjoining streets and the enforcement of their use. As to the sizes of those sewers, and the proportion of storm-water to be allowed to enter them, there is nothing to be said here. The designing and construction of sewers in the city of Yonkers is placed by State enactment in the hands of the water commissioner alone. (Chap. 184 of 1881.) A general system of sewers, with the desired end in view has been prepared by them after careful study.

The disposition to be made of the Nepperhan river itself, after the causes of its pollution have been removed, is a matter for serious consideration. There are on its banks thirteen manufacturing establishments which employ directly 6,000 hands and indirectly support three-fourths of the inhabitants of the city. Without them, Yonkers would be a small village. Their establishment at this point was and is controlled by their ability to use the water of the river for their operations. For ten months of the year the water is sufficiently plentiful and pure for their use. It drives machinery of about 220 horse-power, and furnishes 2,000.000 gallons daily for use in other ways.

To utilize this water for power and for manufacturing purposes, the dams on the stream are essential. The ponds created by the dams are not necessarily nuisances, though they are unquestionably so in their present condition. Their immediate removal would not diminish the nuisance, but would for the present and some time to come intensify it. The withdrawal of the water would expose some twelve or fifteen acres of the bottom, on which there is an unknown depth of filthy deposit. The current in the channel would be accelerated to be sure, but it would still be charged with pollution, and the exhalation would be noisome both from it and the exposed bottoms of the ponds.

If provision is made for keeping filth out of the stream, the owners of the ponds may be required to make them not less than five feet deep in any place, and to so regulate the flow of the water that it shall never be lowered more than two feet below the top of the dams.

An important consideration, in connection with the retention of the dams, is that they enable the manufacturing establishments to carry on their operations with much less water from the city water-works than would be required if they were removed.

In 1881, the average daily consumption of water in the city was 860,000 gallons. Of this, 200,000 gallons a day were used by the factories on the stream. In August, 1882, the use by these factories was 450,000 gallons a day. This was in consequence of the low water in the stream. If the stream water was taken away from the manufacturers and they were forced to use city water for all purposes, the average daily draught from the reservoir would be nearly, if not quite, trebled. This would involve the immediate enlargement of the pumping facilities and the laying of additional force mains, and would, moreover, bring the consumption dangerously near the limit of supply, for the water-shed, from which the city water is derived, cannot be depended upon to furnish more than 3,000,000 gallons a day in a very dry year.

The removal of the dam at Warburton avenue (No. 1) seems to be expedient, however, in order to make the reclamation of the tidal basin along Main street possible. The pond above this dam is now nearly filled with filth and extends across Warburton avenue and under a number of shops on the east side of the avenue, in a wide and shallow pool. By removing this dam and carrying the stream under the avenue bridge and down Nepperhan street in a covered channel-way, an opportunity would be offered for filling in and making fit for occupation, the frontage on Main street for 1,000 feet, which is now in such a condition as to be dangerous to health, and cannot well be made otherwise by any other plan.

The steps necessary to be taken for the abatement of the nuisance are, therefore, as follows:

(1) The construction, at as early a date as possible, of a system of sewers in the streets adjoining the river, and the compulsory connection with them of drains from all the houses and manufactories along those streets and the stream.

(2) The removal from the ponds of all sediment within five feet below the level of the dam, and the walling of the margins of the ponds where buildings are on or near them.

(3) The removal of dam No. 1, and the diversion of the stream to a covered channel in Nepperhan street, and the filling of the old channel along Main street.

The completion of the works will require at least one year. The preparation of the plans and the time spent in advertising for the work, under the requirements of the city charter, will prevent any active steps being taken before next spring. In the mean time it is important that something should be done to lessen the evil at once.

The entire diversion of excrement from the stream cannot be effected without such enormous expense and inconvenience as to make it practically an impossibility. Nor is there any practicable method of excluding all factory wastes or of purifying them before going into the river. Their volume is too great.

Each of the large carpet and hat factories discharges from 50,000 to 60,000 cubic feet of water, more or less polluted, into the river in ten hours. To retain this in any way for deposition or chemical treatment would require for each factory two tanks 1,000 feet long, ten feet wide and six feet deep, or 100 feet in diameter and seven and one-half feet deep. There is not ground enough connected with any of the establishments to erect such structures.

A great amelioration of the stream can, however, be effected, by keeping out of it the grosser impurities, and I would suggest the regulation of this in the following manner, beginning at the upper end of the fouler part of the stream:

(A) Smith Moquette Loom Company:

All water-closet matter to be run into cess-pools which must be ventilated by pipes led to above the roof of the nearest high building. Wool-suds, amounting to about 200 cubic feet a day, to be run into settling tanks and retained until grosser matters are deposited to the satisfaction of the health board.

(B) Westchester Gas-light Co:

Waste to be kept out of the stream entirely, by any method approved by the health board.

(C) Alex. Smith's Sons spinning mill and print works:

Water-closet matter to be treated as above. Water from yarn washing, about 540 cubic feet per day, treated in same manner as wool-suds.

(D) Dwellings on east side of Nepperhan avenue, between Ashburton avenue and the Croton aqueduct (about thirteen houses):

Remove privies from stream and provide cess-pools in earth.

(E) Three or four dwellings on east side of Copcutt's pond (No. 6):

Remove privies from stream.

(F) W. H. Copcutt mill-pond:

Never draw down pond more than two feet below overfall of dam; except in cool weather and full run of water the sluice gate shall be opened and as much sediment run out as practicable by stirring and scraping it at the water's edge. This to be continued until there is nowhere less than five feet of water in the pond, except where there may be hard bottom along the margin.

(G) In the Glen along Garden street:

Remove the twenty or more privies on the banks of the stream and provide cess-pools until sewer is built.

(H) Hall F. Baldwin hat factory:

Provide settling tanks for wool-suds as specified above for (A) and (C). Remove one privy from bank of pond.

(I) Skinner & Co. silk works:

Empty dye tanks into trench so dug that water will not run directly into stream, but will filter away.

(J) Alex. Smith's Sons, carpet factory:

Provide settling tanks for yarn scouring. There are 500 employés at these works, in very large and high buildings. Water-closet on each floor. There does not seem to be any practicable method of disposing of this quantity of sewage except by discharge into the stream.

In a few large buildings, several stories high, is concentrated the population of a town of considerable size, during ten hours of the day. From 1,500 to 2,000 operatives are employed, and their dejections, amounting to between 5,000 and 6,000 pounds a day, are carried by water from closets on each floor and emptied into the stream. The practical difficulty here is on making arrangements for the temporary disposal of a large amount of matter, in a locality where the adjacent ground is nearly all occupied by buildings.

I believe that the reconstruction and rearrangement of the present method of disposal would take as long as the building of the sewers from the river to this point. The case differs from that at the factories further up the stream, in that there are more operatives in less space and with less ground available.

The ordering of any specific immediate remedy in this case is unadvisable, until a careful study of the matter has been made by the owners of the property and the health board and their engineer.

The pond should be scoured by opening the sluice in freshets.

(K) Waring & Belknap hat factory:

Provide settling tanks for the wool-suds as in similar works above. The dejections of about 200 operatives, which now pass into the stream, to be diverted and cared for in the same manner as those of the rest of the employés are now.

(L) E. Underhill's Son brewery:

The wash-water from the tubs and barrels is offensive. There seems to be no means for immediate relief.

(M) John C. Shotts' slaughter-house:

Keep refuse out of stream.

(N) Kitteringham & Co. morocco:

About 2,000 gallons of dye and wash-water enter the stream daily. Just at this point a filthy sewer and drain enters the stream. There is no relief practicable except by the proposed intercepting sewer.

(O) H. W. Flagg hat-factory:

The wool-suds to be settled before entering the stream. One hundred employés. Employés' dejections to be kept out of stream if a practicable method of doing so can be devised.

(P) W. Macfarland silk-works:

Thirty-seven employés. Their dejections to be kept out of the stream, pond should be flushed and scoured in freshets.

(Q) Two stables and about twenty-five privies over the stream, between dam No. 4 and Getty square. Garbage from houses thrown into the stream.

Privies should be removed, and either earth-closets for dry removal be substituted, or a sewer pipe laid in the rear of the buildings along the stream to a connection with the Main street in Getty square.

(R) The interior of the block bounded by Broadway, Main street and Warburton avenue:

The abolition of the privies and the making of connection with the Main street and Broadway sewers, to be compelled at once.

The occupants of some of the buildings on this block have already been compelled to make connection with the sewer, by order of the health board, but have laid the pipes no farther than through the cellar wall, and do not use them.

Peake's and Copcutt's ponds to be scoured in freshets. The temporary remedial measures here suggested may be briefly formulated thus:

(1) Remove all privies on the line of the stream.

(2) Wherever practicable, keep the discharge of factory water-closets from entering the stream.

(3) Compel the precipitation of the grosser matters held in suspension in the water from wool-washing and yarn scouring, before it enters the stream.

(4) Compel the scouring of the ponds by opening the lowest sluice-gates in the first freshet.

Although the factory water-closets pollute the stream to a degree dangerous to health in excessively hot and dry weather, they do not create so directly offensive and horrible a nuisance as does the use of the margin of the stream as a place of deposit for excrement and garbage by the people who live along and over it.

Immediate stopping of this use or more properly abuse is practicable, and is therefore recommended. But the immediate disuse of the various sewers and the factory water-closets which empty macerated and diluted sewage into the river is not practicable.

I desire to acknowledge my obligation to Mr. W. W. Wilson, the engineer to the water commissioners for much valuable information and assistance, and to the proprietors, of the factories for access to their works and information regarding their machinery and methods.

Respectfully submitted,

J. J. R. CROES.

(*a*) *Pollution of a mill-race and pond in the village of Oneida.*—From the village of Oneida, a complaint was received concerning the condition of a certain race-way and mill-pond located in the heart of the village, and causing much suffering and distress by noxious exhalations from the water. The matter was duly investigated by this committee last October, and a full statement thereof is found in the following report.

Rochester, N. Y., *December* 1, 1882.

To the Secretary of State Board of Health :

Dear Sir— Permit me herewith to transmit to you the following results of my inspection, made by request of your Board, on October 7, 1882.

On the pollution of a mill-race and mill-pond in the village of Oneida, N. Y.—The flourishing village of Oneida is located near the north-eastern corner of Madison county, and has a population of about 3,500. Directly through the middle of the town the Erie canal feeder runs in a northerly course, and extending easterly therefrom, a race-way for the supply of a small mill-pond and water-privilege has been excavated between Main and James streets. All of the water used for power and flowing through this race-way is derived from the feeder through the gates of a waste-weir; and it is thus taken and appropriated by the owner of a mill-privilege in accordance with the terms of an old contract originally executed by the Oneida Lake Navigation Company, whose works and franchises subsequently became the property of the State for canal purposes, subject, however, to all private agreements and concessions formerly granted by said corporation. By virtue of this contract, the owner of the mill and race-way is entitled to all of the surplus water flowing in the feeder which is not required for canal purposes, but the exact volume is not definitely stated. The race-way and its small terminal mill-pond are thus seen to be private property; and it is of the condition of these premises that complaint has been made to your Board.

An examination of the locality shows that the said race and pond have been constructed between two principal streets in the center of the village, leaving between the sides of the excavation and the said streets only a comparatively narrow strip of land on each side, both of which are now almost entirely covered with business blocks, hotels and tenements. As there are no public sewers in the two streets adjacent and parallel to the race-way, and as there is no yard room in the rear of the buildings mentioned, the race-way has gradually been made a convenient receptacle for the offal and organic wastes of all the contiguous buildings, many of which have privies projecting out over the water. While the pond is full, there is only a slight current in the race, since the water-supply is limited to the excess in the feeder not required for the use of the canal; and at such times a large proportion of the heavier organic matter has ample opportunity to settle upon the bottom of the excavation or become lodged in the stones and bushes that line its sides. But as in all other cases where a small constant water supply is stored for an intermittent power, the accumulated volume of water is drawn off in a relatively short period of time when much power is required; and the sides of the race, together with a large area of mud and accretions of organic matter in the shallower portions of the pond, are accordingly exposed to the air until they again become covered with water. The great amount of offensive matter thrown into the race and washed down into the pond, in conjunction with the frequent exposures of the bottom and sides while the mill is in operation, have caused during the summer months an extensive development of disagreeable odors and noxious exhalations, to which the most of the sickness in the village has been ascribed.

It is, therefore, apparent that the nuisance complained of by the village authorities is due primarily to the filthy condition or direct pollution of the race-way, which is several hundred feet long; and indirectly also to the accumulation and intermittent exposure of organic matter in the small mill-pond, as already mentioned. The decay of algae in the pond in consequence of fluctuations in the water surface may also have its share in producing offensive odors; but this may, for the present, fairly be neglected in comparison with the other causes.

The remedy for the evil is simple, and consists in a thorough cleansing of the race-way and mill pond, combined with a rigidly enforced prevention of subsequent pollution by sewage, fæces, or any other kind of organic refuse. So long as the race is treated and used as an open cesspool, sickness and annoyance will be sure to follow; and if the occupants of the various buildings and hotels abutting upon the race object to a system of sewerage, their wastes and offal must be removed in some other and less convenient manner. To all of these propositions the attention of Dr. H. W. Carpenter, the president of the board of trustees, was duly drawn, and the urgent necessity of taking prompt action in the premises was fully realized by all present.

Respectfully submitted,

EMIL KUICHLING,

Civil Engineer.

(*e–f*) *Mud margins of Seneca lake at Geneva, and South bay at Hudson.*— The attention of this committee was also called to the malaria and sickness caused by the exposure of foul mud margins of Seneca lake at Geneva, and of South bay at Hudson. Both of these cases were carefully investigated, and the results are fully recorded in the following reports made to the Board by Emil Kuichling, of Rochester, and Wm. S. Egerton, of Albany, the civil engineers employed for the occasions:

ROCHESTER, N. Y., *December* 12, 1882.

To the Secretary of the State Board of Health:

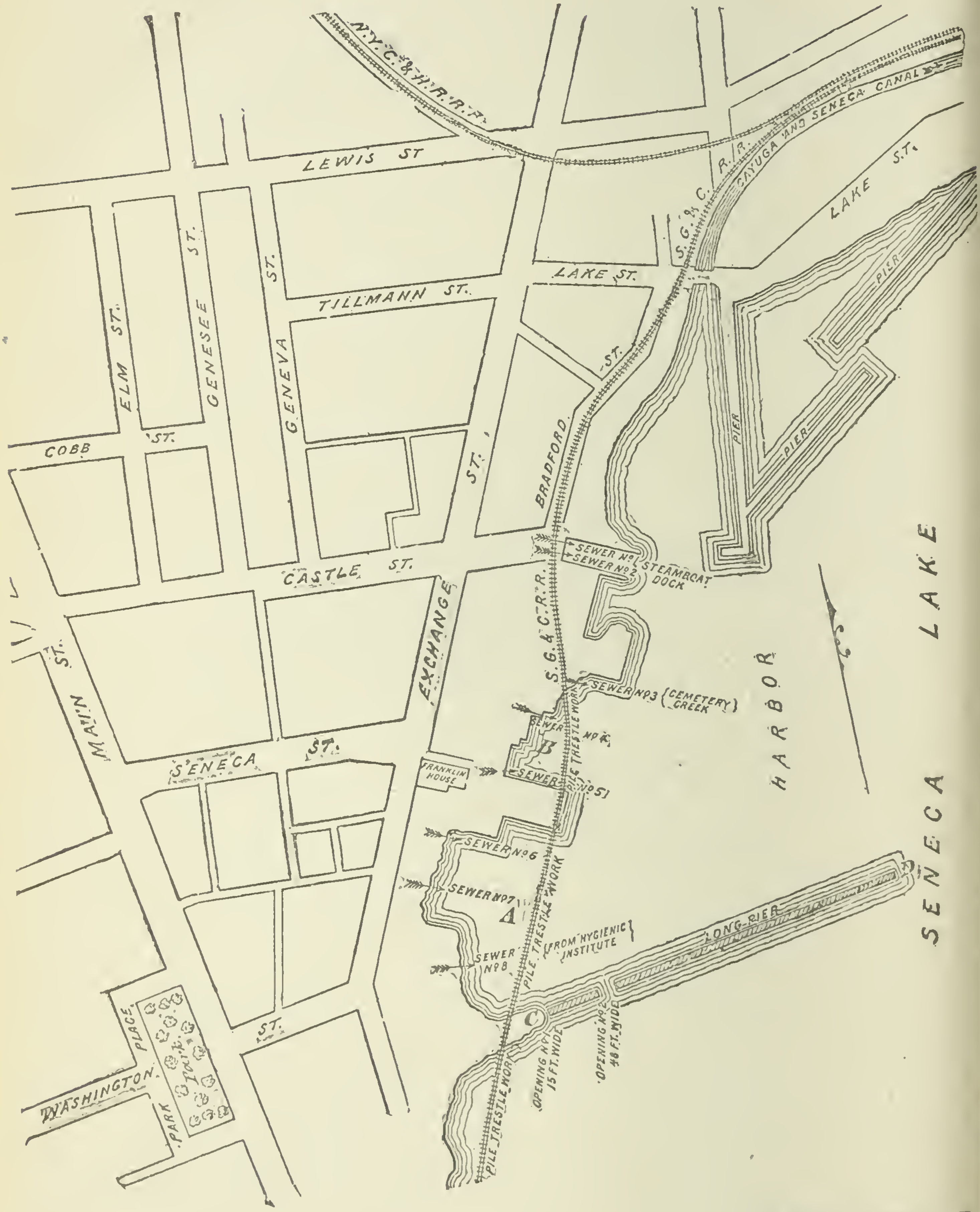
DEAR SIR — In accordance with instructions recently received from your Board to investigate a certain nuisance in the village of Geneva, Ontario county, N. Y., caused by the muddy margin of Seneca lake, and extending from the long pier or break-water, for some distance northerly to the rear of the Franklin House, the undersigned begs leave to state that he made a thorough examination of the locality on Wednesday, November 29, and would now respectfully submit the following report:

The large and flourishing village of Geneva is situated at the north-western corner of Seneca lake, and has at present about 6,000 inhabitants. The southern portion of the town is built upon a hill which rises quite abruptly from the water, leaving only a very narrow beach; while in the northern portion the ground slopes gently upward from the lake, and then becomes comparatively level, thereby affording topographical advantages for the erection of numerous business blocks and manufacturing establishments of various kinds. The village possesses a relatively large commerce, owing to the means of communication presented by the large lake, by the N. Y. C. & H. R. R. R., and the S. G. & C. R. R., and also by the Cayuga and Seneca canal. This latter is an important branch of the Erie canal, and enters the lake at the north-western corner, where a commodious artificial harbor has been formed for the safety of canal boats and other vessels, by the construction of a system of jetties, or break-water piers, which extend out into the lake from the western and northern shores, as shown upon the accompanying map.

Now as the natural outlet of the lake is near its north-eastern corner, or directly across from the village and more than one mile distant, and as the harbor is the most convenient place into which to conduct the drainage from the adjacent territory, it is not surprising that much organic matter should have accumulated in this portion of the lake, and induced an extremely luxuriant growth of water-weeds and the smaller algae in the still water within the piers. The decay of this aquatic vegetation, which is facilitated by fluctuations in the surface of the lake, is often the source of a most offensive odor; and it is of this that the village board of health has principally made complaint and addressed a memorial to the Governor, by whom the matter was referred to your Board for investigation and advice.

By referring to the map which I have carefully compiled and reduced from such maps as were placed at my disposal by the village authorities, it will be seen that there are in the long pier or break-water, marked CD, only two openings for the passage of water, one of

Map of Harbor of Geneva, N. Y. November 26, 1882.



E. KUICHLING, C. E.

fifteen feet width, immediately adjoining the shore, and the other of about forty-eight feet width, located about 175 feet from the former; and also that the Syracuse, Geneva and Corning railroad, which is here built along the western shore of the lake, has cut off from the harbor two small bays or indentations, marked A and B, the railway track being, however, carried across the said bays upon a system of timber piles, driven in groups of four and spaced about twelve feet apart longitudinally, thus leaving ample room for the circulation of the water between the harbor and the shore. These two bays are irregular in shape, their greatest dimensions being respectively about 500 feet long and 280 feet wide, and 250 feet long and 150 feet wide, while their areas are respectively about two and one-fourth acres and one-half acre. The water inside of the railway trestle-work is generally quite shallow, its greatest depth not being more than five or six feet, except in a few places, and the bottom is covered with aquatic plants of many varieties. The shore of the larger basin, marked A, is very flat and muddy, so that a comparatively slight change in the level of the lake will either cover with water or else expose to the air, a relatively large area of black and offensive mud, which sustains a dense growth of small algae; and as the lake is considerably affected by the wind, such fluctuations and consequent exposures are of frequent occurrence. In the smaller basin, marked B, the shore is not so muddy, and is protected in great part by low docks and the foundation walls of buildings.

A close examination of the locality showed that the original shore of the lake was some distance inland, and that the lake had manifestly been encroached upon by filling up the shallow margins with earth and all kinds of rubbish, such as brush, ashes, garbage, and general refuse matter from streets and manufacturing establishments. The village, moreover, is not provided with any system of sewerage, and all that has been accomplished in the matter of drainage and sewerage has, with only a single exception, been executed by private enterprise. Under such circumstances, it is natural that each individual should have sought to remove the wastes from his building in the cheapest and most expeditious manner, by constructing a drain directly into the harbor, the mouth of the drain terminating at the shore; and as these drains were made much larger than necessary for one dwelling or place of business, other buildings were gradually connected with them, until each of these sewers or drains at length serves to remove the wastes from an entire group of buildings, and to discharge its contents upon, or very near to, the shore. From Washington street to Castle street, a distance of about 1,100 feet, there are no less than seven such private sewers, and one large public sewer from the higher portion of the village, emptying into the harbor; and of these eight sewers, five discharge into the two shallow bays or basins, A and B, which have been cut off from the harbor by the railway trestle-work, as shown upon the map. It is difficult to estimate the quantity of sewage matter thus deposited along the margin of the harbor between the above-named points, but it is probably fair to assert that at least two hundred private dwellings, a number of business blocks and two large hotels are connected with these eight sewers.

From the foregoing statements and description of the harbor, it will now be easy to understand how the offensive odors arising from the shallow basins, designated A and B, and also from the foul, muddy margin of the larger basin, in particular, have been, and continue to be, produced to such extent as to become a public nuisance. The piers, or break-waters, which form the harbor, have prevented the waves from beating upon the shore and thus uprooting the larger water-weeds. The latter have, therefore, been unrestricted in their growth, and have in turn thrived upon and retained near the shore much of the organic matter derived from the surface drainage, the numerous sewers, and the rubbish which was thrown into the shallow water along the original shore, in order to gain land. In the stagnant water thus created a new species of small algae, belonging to the *Nostoc* family, and having the property of emitting an intensely disagreeable odor when undergoing decomposition, has sprung up and is being nourished by the abundant organic substances deposited in the water and the mud-margin by the incessant flow of sewage. This class of algae flourish in warm weather, and they increase with wonderful rapidity, often forming masses of large size in the latter part of the summer; but they are quickly killed by exposure to the air and hot rays of the sun when the water level is lowered by storms, or in times of drought, or when they become entangled in the stems and leaves of the larger weeds, or are driven ashore by the wind; and in decaying they give off a large amount of gelatinous or slimy matter which soon putrefies and emits the nauseous odor complained of. The decomposition of the sewage also contributes to the evil resulting from the presence of these algae, but to what extent it will be difficult to determine. At the time of my examination, the water in the lake was quite low, so that a large area of mud was exposed in the bay or basin, marked A, which showed in the most positive manner great bars or deposits of sewage matter about the mouths of most of the drains already mentioned; but as the surface was then frozen, no odor was perceptible. In the summer, however, the exposure of this mud can scarcely fail to become eminently dangerous to the public health.

To remedy the evil thus resulting from the construction of the harbor on the one hand, and from the pollution of shore on the other, I venture to submit the following suggestions: First, that the village authorities take the necessary measures to prevent the discharge of sewage into the harbor and along the shore. This can readily be accomplished by the construction of a suitable intercepting sewer along the lake front, or through Exchange street, by which all organic wastes will be deposited into the lake in sufficiently deep water through one or two properly selected outlets; second, that the existing mud margins in the two bays or basins, marked A and B, be abated, either by dredging, or else by filling in with fresh and clean earth to sufficient depth to remain above the level of ordinary high water in the lake; also that the shallowest portions at least of the bays themselves be treated in a similar manner; third, that a larger opening be made for the passage of water through the long pier or break-water, marked CD, so as to secure a better circulation of the comparatively stagnant water in the harbor, since in low water the present small opening is entirely dry, while in the larger one the water-way is reduced to a width of not more than about twenty-five feet, in consequence of the deposit of large stones upon which the crib-work is built. To be effective, the entire shore section of the break-water between the two existing openings should be removed, and this could readily be done without detriment to the harbor as a place of refuge for vessels.

In regard to the effect of the construction of the trestle-work of the S. G. & C. R. R. across the two shallow bays, A and B, in obstructing the natural circulation of the water and thereby causing the growth of the water-weeds therein, it is my opinion that the piles are sufficiently far apart to afford ample space for a free and natural flow or interchange of the water in the harbor and said bays; and were it not for the dense growth of eel-grass and other large water-weeds which now prevents or greatly retards such circulation, and often becomes so luxuriant as to offer serious resistance to the passage of small boats, I do not think that this question would be raised.

With reference to the larger and coarser varieties of aquatic vegetation which also grow in great quantities for a considerable distance beyond the line of the railway, I can discover no other effective method of relieving the harbor of their presence except by occasional dredging; but the results of such work would only be temporary, as the conditions favorable to their growth cannot be wholly removed without destroying the harbor itself. As, however, the State owns and controls the harbor, and as both the State and the village have important interests in its proper conservation, it will become desirable that whenever such clearing out or dredging may once be ordered by the State authorities, the village should at the same time be required to refrain from depositing any sewage in the shallow water near the shore, and to conduct said sewage through suitable conduits to such outfalls as will cause the least injury to the harbor afterward.

To carry out the suggestions made above, it may perhaps be necessary to obtain special legislative enactments, which will define in an equitable and satisfactory manner the several public and private interests and obligations involved in the premises; but as the consideration and settlement of these questions is not in my province, no further cognizance of them need be taken here.

EMIL KUICHLING, C. E.

---

*Preliminary Report upon the South Bay at Hudson.**

To the Secretary of the State Board of Health:

Dear Sir—After a careful examination of the South bay at Hudson, made in company with the city engineer Mr. George C. Power, I am of the opinion, first, that to secure additional circulation and effective scour of the area embraced by the South bay, an additional opening in the railroad embankment northward would be of no material benefit; second, that to cover this area to a depth of one and a half feet at low tide in the Hudson, by erecting a dam of sufficient height at the present opening, would, as long as deleterious drainage and sewerage is permitted to flow into this basin, but increase, if any thing the existing defects, and lead to further and more tangible complaints.

---

* The Governor, having referred various petitions and complaints relating to the South bay, to this Board, the evils complained of were soon traced to defects of drainage and sewerage of the city.

My opinion with reference to the relief to be secured by an additional opening northward is based upon the fact, that the trend of the tidal currents is in a direction approximately parallel to the railroad embankment and nothing but a flushing action can be secured from this source of additional supply.

The filling of slag and detritus from the iron works, the location of the adjacent pier, and an examination of the mud-flats defining the channel at low water, all west of the railroad, form obstructions to an effective influx or scour of the tide. Such action would be limited to a comparatively small area, not affecting in the least the present status of the bottom, or the circulation at the marginal flow lines eastward or northward.

The tidal action, in my opinion, would be similar to that of flushing a sewer, and at high tide, permit whatever sediment might be brought by the inflowing waters to settle upon the flats and add to the accumulations now being deposited by the streams and natural watercourses.

An examination of the water within the South bay throughout the length of its shorter diameter, at low tide, did not disclose any impurities, and no odor was perceptible, the water was clear, a slight current toward the opening at the railroad observable, and small fish were seen in large quantities at different points.

The only objectionable point was found at the existing outlet of the culvert, which receives a part of the city drainage and discharges directly into the South bay at its north-easterly margin.

The easterly half of the bay is covered with a rank growth of aquatic plants, which, during the period of growth, cannot be materially detrimental to health, but in the fall, when decay takes place, must be a source of complaint, and affect the atmosphere deleteriously. A permanent covering to a depth of one and a half feet of this area, would not check the growth of this character of vegetation.

Effective and beneficial results can be secured by maintaining an open course for the drainage, from the aforesaid culvert, in a direct line with the present opening at the railroad embankment; the maintenance of direct and open channels for the inflowing streams, and if possible the burning of all vegetation before decay takes place, supplemented by a gradual filling-in of the northerly half of the area at present laid bare at low tide.

Respectfully submitted,
(Signed) WM. S. EGERTON, C. E.

IV. *Systematic Sewerage and Drainage of Towns and Villages.*

The impulse given to the consideration of sanitary questions by the general establishment of local boards of health in the towns and villages throughout the State, consequent upon the institution of the Central State Board, and owing in great measure to the zeal and perseverance of the latter, has resulted in a most gratifying demonstration of interest in the subject of drainage and sewerage by the citizens of a number of large villages. Requests for advice have been numerous, and have been responded to and encouraged both by the committee and the civil engineers in its employ.

The problems presented are often of the most complex character, and require considerable preliminary labor before a rational conclusion adapted to the special circumstances can be submitted. As, however, such necessary preliminary work and the collection of necessary data or local statistics is quite expensive, and belongs rightfully to the village or town seeking the Board's counsel, the committee was compelled in most cases to deal with the subject of sewerage in general terms alone, and to postpone the expression of a definite opinion in particular cases until the said village or town authorities shall have caused the requisite statistical and topographical information to be properly prepared.

Among the larger villages whose authorities have sought advice relating to sewerage from the Board, we mention Batavia, Geneva and Oneonta; while among the cities of the State, applications for counsel have been received from Buffalo, Schenectady, Yonkers, Hudson and Auburn. Visits to these places were made as soon as practicable with experienced engineers; but as it was generally found that conditional opinions alone could be given upon the particular questions submitted in consequence of the lack of the requisite maps and data, the local authorities were advised how the latter ought to be prepared, and received meanwhile from the experts such general suggestions relating to proper sanitary drainage and sewerage as the circumstances warranted.

In illustration of the examinations of localities with reference to sewerage that have been undertaken by the committee upon appeal from the respective local authorities, the following reports which have been made to the committee by its engineers in relation to some of the above-named places are herewith submitted:

To the Secretary of the State Board of Health:

Dear Sir— In the latter part of last May, I was requested by your Board to advise with the municipal authorities of the city of Hudson in regard to the contemplated sewerage of a portion of that city, and was notified that the date of this conference had been fixed for Monday, June 5. I accordingly went to Hudson, and was met on the day mentioned by Recorder Hoysradt and the health officer, Dr. Cook, who informed me that both Mayor Hoysradt and City Engineer Powers had been unexpectedly called away from the city, and that the former, who had deeply interested himself in the sewerage question, could not return for several days. At the request of the officials present, however, I examined the locality under consideration as thoroughly as was then practicable, and in the absence of the necessary statistics and engineering data, submitted to them such general suggestions relating to the proposed sewerage as I deemed pertinent. These suggestions, together with a general statement of the local conditions attending the problem, I have now, at your request embodied in the following report:

The city of Hudson is built upon the ridge of a large spur of the hill on the eastern bank of the Hudson river. This spur rises quite abruptly from the river to a height of about fifty feet, and its transverse section then becomes trapezoidal, the top being nearly flat, while the sides slope rapidly down into the beds of the adjacent valleys. Longitudinally, or in an eastern direction, the upper surface of the spur gradually widens and rises for a distance of about one and one-half miles, terminating in "Prospect Hill," an eminence 300 feet above the surrounding lands and 500 feet above the river. Two shallow bodies of water, called North and South bays, extend inland on each side of the ridge for nearly 1,000 feet from the general line of the shore, thus causing the western portion of the spur to become a promontory. Both of these bays receive the drainage of a comparatively short lateral valley having more or less steep slopes, from which large quantities of earthy matter are annually washed down by the rain; and both are moreover almost wholly separated from the river by the embankments of the N. Y. C. & H. R. R. R., communication between the waters of the bays and river being maintained only through relatively small openings left in the road-bed. Almost all of the buildings and dwellings of the city are located upon the gently rolling surface of the ridge, so that extremely favorable conditions for excellent sewerage and drainage are here presented.

The district proposed to be sewered is virtually the southern half of the town, and may be described as being bounded on the north by Warren street, which is the principal thoroughfare of the city, and extends along the crest of the ridge from the bluff at the river to the foot of Prospect Hill, and on the south by the small ravine or valley terminating at South bay. The Boston and Albany railroad and two or three public streets cross over the upper portion of this ravine upon high earthen embankments, at the bottom of which small culverts have been constructed for the passage of the water; but in consequence of some defect or obstruction in the culvert under the railroad embankment, a pond of considerable extent has been created in the ravine immediately above said embankment. At the date of my visit the water in the pond was so high as to entirely conceal the mouth of the culvert. A little further up the valley one or two public sewers and several drains from adjacent dwellings were found to be discharging their offensive contents into the small rivulet which courses through the ravine and supplies the pond. In dry weather the flow of this rivulet is considerably less than the volume of sewage emptied into it, and we, therefore, have here the unusual spectacle of a large open sewage reservoir, located closely in the rear of a thickly populated district.

Below the railroad embankment, the northern bank of the ravine is lined with elegant residences for a long distance, and here again a number of other sewers and drains from both streets and dwellings are conducted into the valley, their contents in some cases being allowed to flow freely down the steep slope until they reach the small water-course in the bottom. Several years ago complaint was made of the effluvia arising from the rivulet in summer time, and the city was finally compelled to construct a covered conduit or sewer of considerable length through a portion of the lower valley in place of the open stream.

From the foregoing it will thus be seen that a comparatively large amount of slightly diluted sewage is at present conveyed, mainly in a small and open water-course, through the ravine into South bay. The latter is, however, merely an extensive but quite shallow marsh, overgrown with rushes and other aquatic plants, and affected moreover by the tide, so that at ebb large areas of mud are left exposed to the air. In view of such circumstances, it is by no means surprising that an unhealthy condition of the city has ensued.

For remedying the existing evil, two plans were submitted to me for consideration by the health authorities. The first was to convert the natural open water-course in the valley entirely into a covered sewer which should ultimately receive through lateral branches all of the sewage of the southern half of the city, while the second contemplated the construction of a new system of sewers in the streets along the edge of the bank, and the discharge of the sewage directly into the river. The former plan I rejected at once, not only because it would require a very large and costly conduit to carry away the storm drainage of an extensive hilly area, but also because it would leave the sewage to be deposited in South bay, which, from its nature, is utterly unfit to be made a receptacle for such matter, and should, on the contrary, be preserved rigorously from any kind of contamination. The latter plan, on the other hand, is vastly more rational and economical, and, with a few modifications and additions, received my approval.

As the city engineer was absent, and as no accurate maps, profiles and other necessary data and statistics could then be produced, it was impossible for me to consider the problem otherwise than in a general manner, and to point out to the municipal authorities some of the details involved in the preparation of an intelligent design for a modern system of city sewers. The substance of the recommendations made by me are herewith submitted for your consideration.

1. To intercept all public sewers and private house drains now discharging into the ravine or valley, from the head of the latter at or near Worth avenue to the Hudson river. This interception to be accomplished by means of a suitable modern tight sewer laid through the following named streets: Warren street, from Worth avenue to South Seventh street; South Seventh street, from Warren street to Union street; Union street, from South Seventh street to South Fifth street; South Fifth street, from Union street to Allen street; Allen street, from South Fifth street to South Third street; South Third street, from Allen street to Montgomery street; Montgomery street, from South Third street to the edge of the steep slope descending toward the river, and from the said edge out into the "Hudson" channel of the river by means of iron pipe.

2. The sewage thus intercepted to be discharged so far out into the river as to preclude the possibility of its being swept by the usual currents of the stream easterly into South bay through the opening in the embankment of the N. Y. C. & H. R. R. R.

3. To regard the route outlined above as subject to more careful study of the topography and other local conditions, since the necessary data were not then furnished.

4. To make the new system of sewers for the removal of sewage only, wherever expedient, and to allow the rain fall to flow away over the surface into the adjacent valley. If required, a short and shallow transverse drain may be constructed at suitable intervals for the purpose of conveying storm waters from the intermediate areas more expeditiously into the natural water-course of the valley. It should here be remarked that I was informed that a large portion of the ravine

was private property, and that the owners strongly objected to the discharge of any further drainage from the city into it. Without discussing the validity of this objection I advised the authorities to submit the case to competent jurists, and then to be guided by their opinion. Should the circumstances attending the case be so peculiar as to prevent the city from permitting its surface drainage to flow freely into the adjoining natural water-course, the new intercepting sewer must obviously be designed to receive the rain-fall as well as the sewage, whereby the expense of its construction will be greatly increased.

5. In order to facilitate a rational and economical design for the proposed system of sewers, I advised the preparation of a proper topographical map of the entire district, and the collection of all available data relating to the existing public sewers thereon, together with the statistics of rain-fall, water-supply, dwellings and population. Also to determine by a series of experiments with floats how far from the shore out into the river it will be necessary to lay the sewage discharge pipe so that its contents shall not be carried back by the currents into South bay. Observations should also be made concerning the maximum flow in each intercepted sewer, and the peculiarities of each subdivision of the district thoroughly studied, in order to determine how much of the rain-fall it may be advisable to admit into the new sewers, and thus arrive at their proper dimensions. It is only when provided with such information that the details of a scheme for sewage can be intelligently and satisfactorily planned.

6. Finally, and for the purpose of improving the present condition of the public health, I recommended the clearing out, or lowering if necessary, of the culvert under the embankment of the Boston and Albany railroad already mentioned, so as to remove the pond of sewage, and the adoption of such measures as will insure throughout the whole valley a free flow for the unpolluted natural surface drainage from the hill-sides into South bay.

Respectfully submitted,
EMIL KUICHLING,
Civil Engineer.

ROCHESTER, N. Y., *December* 1, 1882.

To the Secretary of the State Board of Health ;

DEAR SIR — Permit me herewith to transmit to you the following report, made by request of your Board.

On the sewerage of Oneonta.— The village of Oneonta, in Otsego county, is pleasantly situated on the northern side of the Susquehanna river, and has at present a population of about 2,500. Last year it was provided with an excellent system of water-works, in consequence of which the attention of the citizens has been directed to the subject of the proper removal of the resulting liquid waste, and an appeal for practical counsel and advice pertaining to systematic sewerage for the village was accordingly made to your Board.

The principal portion of the village is built on the hill-side, but the map of the corporation shows that a large portion of the broad alluvial flats, lying between the foot of the hill and the river, has also been laid out into streets and building lots, thus anticipating a great increase in size and population. Directly in front of the town a large area of this low ground is quite marshy in consequence of insufficient drainage; and into a sluggish and badly defined water-course traversing it, a considerable amount of sewage is permitted to discharge from one or two small public sewers, besides a number of private drains from the buildings on the adjacent slope. In the main part of the village the face of the hill is serrated by two or three large gullies, with a number of minor depressions, through which the natural surface drainage finds its way into the river. These natural water-courses contain, however, very little water in dry seasons, and the quantity, therefore, becomes appreciable only during times of rain-fall.

From the foregoing brief description of the topography of the village, it will be seen that all storm water can readily be conducted into the conveniently located gullies and tributary minor depressions; and hence, also, that a system of sewers for the present populous area on the hill-side would be designed most economically if the pipes were proportioned so as to remove only the liquid wastes, together with as much rain-fall from the roofs of the buildings as might be deemed expedient. The flat and swampy area between the hill and the river can easily receive a separate and distinct treatment, and the same remark will also apply to the lower part of the western district, since in both cases there is abundant fall available for thorough drainage and sewerage, whenever the latter may become necessary.

It should here be mentioned that no definite conclusions regarding dimensions for the contemplated sewers, and the most advantageous routes therefor, could be reached at the time of my inspection, on September 7, 1882, as the necessary data for the rational determination of the problem had not been collected and provided by the village authorities. I could, therefore, only deal with the question in general terms, or else proceed upon unverified hypotheses, which was done in a few instances merely for the sake of illustrating how the sizes of sewers are determined, and of explaining the difference between the so-called "separate" and "combined" systems.

In order to become prepared for an intelligent discussion of the sewerage of their village, I advised the local board of health and the trustees to cause a proper topographical map of the corporation to be made, so that an engineer could quickly recognize the several natural drainage areas in the district, and plan his work with reference to them. A map of this kind is practically indispensable, since from it all sanitary experts can readily form an opinion regarding the principal features of any contemplated scheme for sewerage, and give it their approval or else point out wherein it may be deficient; it will, moreover, have a permanent value to the residents, as upon it there will be delineated the course, size and depth of every branch and main in the entire district. In the science of engineering, there are no mysteries; and the true expert seeks rather to explain the various difficulties that encompass his work, instead of becoming possessed of exclusive information pertaining to a given locality. A topographical map is, therefore, not only a valuable safeguard to the community at all times, but it also imparts a healthy stimulus to the engineer who may be called upon to design a system of sewerage and drainage, as he then becomes conscious that his plans may at any time receive the critical scrutiny of other, and perhaps more experienced, members of the engineering profession.

In the case of Oneonta, a ready and convenient ultimate outfall for the sewage is afforded by the Susquehanna river, and the facilities are also present for disposing of the sewage either by means of broad irrigation upon the level field adjoining the stream, or else by means of intermittent filtration. The time is, perhaps, not far distant, when the pollution of our rivers, which are used as sources of water supply for cities and towns along its course, will be prohibited by law in the interest of public health; and it is, therefore, a subject of grave consideration for the local authorities, as well as for the State, how to dispose of the liquid organic wastes of a large and rapidly growing community. To this element of the general problem of sewerage, the attention of the trustees and board of health was earnestly directed, so that due provision for a future partial purification of the sewage could be made in the design.

As the time at my disposal was limited, I was unable to make any instrumental surveys, and could accordingly not give definite advice respecting certain routes for a trunk sewer that were proposed. Such opinion, however, as I could form simply by a hurried examination of the locality was duly imparted to Mr. W. L. Brown, president of the village board of health, Dr. Case, the health officer, and Mr. Walling, the resident surveyor, with the recommendation to carefully survey the district before finally deciding upon the course.

Respectfully submitted,
EMIL KUICHLING, C. E.

ROCHESTER, N. Y., *March* 27, 1882.

To the Chairman of Committee on Drainage, Sewerage and Topography; State Board of Health:

DEAR SIR— In relation to the several questions pertaining to public health which have been submitted to your Board by the mayor, the board of health, and other officials of the city of Auburn, N. Y., the undersigned, who was directed about the beginning of this month, to examine into said questions, begs leave to submit the following report:

The accompanying documents were transmitted to me, from Dr. E. Harris, Secretary of the State Board of Health, and consist of the following:*

1. A letter, marked (A), to Dr. E. M. Moore, from D. M. Dunning, of Auburn, N. Y., dated January 31, 1881, and asking advice concerning a contemplated main sewer for draining an area of about 100 acres of said city.
2. A diagram, marked (Aa), accompanying the aforesaid letter.
3. A letter, marked (B), to the State Board of Health, from Hon. D. M. Osborne, mayor of Auburn, N. Y., dated February 8, 1881, and asking general advice in the matter of sewerage and drainage of cities and towns.
4. A letter, marked (C), to Dr. E. M. Moore, from Charles L. Sheldon, of Auburn. N. Y., dated February 8, 1881, and referring to the same matter contained in the letter marked (A) above.

---

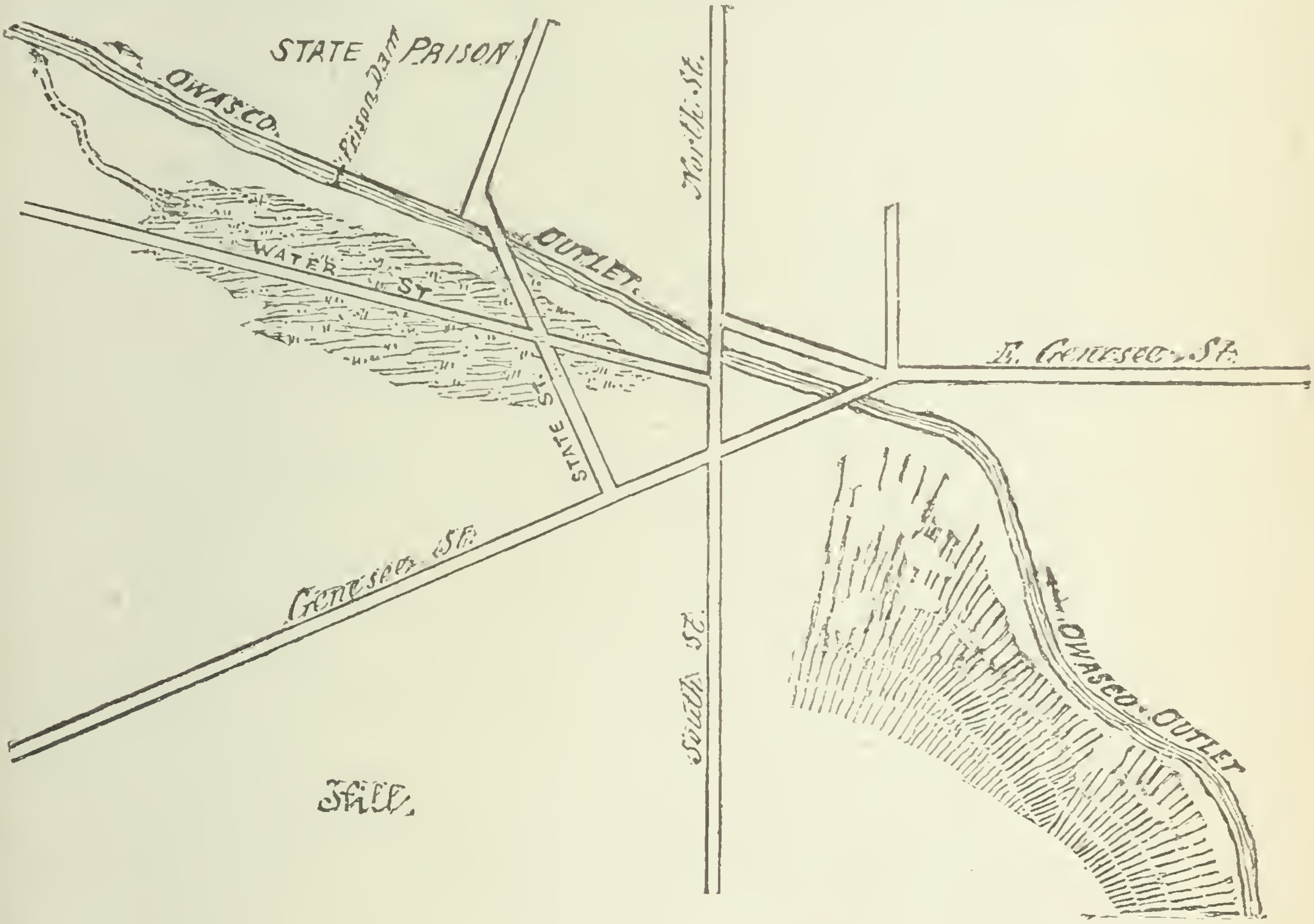
* Not printed.

5. A letter, marked (D), to Dr. E. Harris, from Dr. Theo. Dimon, of Auburn, N. Y., dated December 27, 1881, and relating to a certain district, adjacent to Water street, in said city, which is rendered swampy in consequence of back water in the Owasco outlet caused by the prison dam.

6. A letter, marked (E), to Dr. E. Harris, from Dr. John Gerin, health officer of Auburn, N. Y., dated February 7, 1882, and referring to the pollution of the Owasco outlet by the sewage of the city of Auburn.

The undersigned has read attentively all of the above-named letters, and on March 17, 1882, went by appointment to Auburn in company with Dr. E. M. Moore, prepared to examine into the several questions submitted to your Board by the municipal authorities. Through some misunderstanding, however, we did not meet the local board of health, but were received instead by the school board, who had obtained the impression that an examination of the condition of the public schools of the city was to be made. Considerable time was thereby

Diagram showing Water Street Swamp District in Auburn, N. Y.



lost which might have been devoted to the real object of our visit; and we were consequently compelled to accept and proceed upon the data kindly furnished by Mr. Sheldon and Dr. Dimon, from whom we learned the following:

1. That the main sewer alluded to in the letters of Mr. Sheldon and Mr. Dunning, marked (A) and (C), was recently built to the entire satisfaction of all parties interested, and that no examination of said sewer question was now required.

2. That the communication of Mayor Osborne, marked (B), probably had reference to the same subject, and accordingly needed no further attention.

3. That in relation to the question of the pollution of the Owasco outlet by the sewage of the city submitted by Dr. Gerin and marked (E), there appeared to be at present no occasion for alarm, since said stream contained at all times a sufficient quantity of water to thoroughly dilute and quickly remove beyond the corporation limits the sewage matter which is now discharged into it.

The complaint of Dr. Dimon, marked (D), therefore alone remained to be investigated, which was done as thoroughly as the opportunity permitted. From the evidence presented, it appears that a small swamp had formerly existed in the vicinity of what is now called Water street in said city, and that this swamp extended for some distance along the southern side of the Owasco outlet, reaching from the stream to the foot of the hill now covered by the principal portion of the city, as indicated upon the appended diagram; also that said swamp was in existence long before the construction of the State prison dam, and that the original banks of the stream were higher than the surface of the marsh. Within the city limits, the Owasco outlet has a very rapid fall, thus affording a rare opportunity for the utilization of water power and the development of manufacturing industries. It does not appear that the said swamp was caused by any direct overflow or some minor branch of the outlet from a higher level; and as the banks of the stream were above the surface of the marsh, it was assumed by many persons that the swamp was occasioned by the percolation of the water in the stream through its bed and its southern bank into and upon the adjacent low ground. The original outfall for the waters of the wet district is stated to have been a small water-course discharging into the Owasco outlet at a point somewhat westerly of the marsh and where the surface of the stream was at a considerably lower level than immediately at the swamp. This low area has in the course of time been artificially filled up with earth, and its site is now occupied by public streets and buildings used both for business and dwelling purposes. Some of the streets in this district are provided with sewers, in particular, Water street, through which there has been constructed a large outlet sewer at a depth of about twelve feet below the present surface.

But, notwithstanding the existence of these sewers, Dr. Dimon assures me that the subsoil in this area is thoroughly saturated with water at a depth of from seven to eight feet below the present surface, and that in many places the moisture enters cellars and the foundation walls of the buildings, thereby prejudicing the health of the people. His inference is that this condition of the subsoil results from the setting back of the water in the outlet by the prison dam, and that consideration for the public health demands its removal.

The question to be solved is in relation to the origin of the swamp that formerly existed and has since been filled up. From the statements made above, I am led to doubt that the marsh was caused by the percolation of the water in the outlet through its bottom and southern bank; and a brief examination of the geological structure of the hill to the south and west of the outlet sufficed to assign an entirely different source for the water which permeates the subsoil of the Water street district. The hill referred to has upon its northern face gentle slopes which gradually pass into abrupt descents easterly toward the stream. Its higher portions are covered with deep layers of sand and gravel, into which wells have been sunk in many places from twenty to thirty feet in depth for the purpose of obtaining water, and without reaching the underlying shale and limestone rock. A vast volume of porous material is thus at hand to receive and absorb the rain-fall, which filters slowly through the mass until it reaches an impervious stratum; and upon the surface of this stratum the water then flows subterraneously until it has an opportunity to make its way through the superincumbent material, when it manifests itself as a spring. If now it cannot find a ready outfall, it will accumulate, become stagnant and form a marsh. In this manner the Water street swamp district may derive the water saturating its subsoil equally as well as through percolation from the outlet.

But before any conclusion should be drawn, other evidence submitted to me by Dr. Dimon ought to be taken into account. Taking as a datum plane the level of the present surface of the ground at the intersection of State and Water streets, then; first, the ordinary water surface in the outlet behind the prison dam is eight feet below said datum; second, the original surface of the swamp is from seven to nine feet below said datum, or substantially the same as the present water surface behind the prison dam; third, the rock is more than twelve feet below said datum in Water street, since it was not encountered in the sewer excavation through said street, which extended only to hard-pan or shale; fourth, in excavating for the foundations of a building on the west side of State street, between Water street and the outlet, a hard bottom of either rock, shale or hard-pan was found about seven feet below said datum, or about one foot above the water surface of the outlet behind the prison dam: fifth, that the original swamp is sharply defined in excavations of sufficient depth by a stratum of dark muck from three to four feet in thickness, which rests upon shale, hard-pan or stiff clay. To the foregoing we may also add that the original bed of the outlet through the city is in general rocky, as may be seen at numerous places where the stream falls in cascades and rapids over limestone ledges varying in height and thickness.

A careful consideration of the foregoing evidence alone, without having at hand facts relating to the case which can only be obtained from long continued and rather expensive examinations, leads me to infer, that the cause of the original swamp and the present saturation of the subsoil in this district should be sought in the water which is stored up in the porous soil of the large hill after every rain-fall, and which finds its way along some impervious stratum down the northern slope into the low ground mentioned; but in order to decide the question definitely, I recommended to Dr. Dimon that a series of borings be made at a number of convenient points in the swampy district, and that pipes two or three inches in diameter be inserted into the holes thus made, so that the elevations of the subsoil water level standing in these pipes can be obtained at various times and under varying conditions. By comparing the data derived in this manner with each other, and with the water level in the outlet behind the prison dam, a sufficiently accurate knowledge of the character of the earthy strata overlying the shale, hard-pan, or rock in the locality, together with a satisfactory solution of the course of the subsoil water, may be economically secured. Accordingly, before any steps are taken for the removal of the prison dam, whereby a valuable water privilege belonging to the State and affording considerable power for driving machinery in the prison would be destroyed, I would advise that a thorough investigation of the nature just indicated be made.

The fact that the deep outlet sewer through Water street does not now drain the sub-soil sufficiently for sanitary considerations is no evidence that extensive percolation takes place through a large volume of embanked earth from the outlet. It appears that this sewer was built with exceptional care, and that every precaution was taken to render it water-tight. Under these conditions it is easy to comprehend why it cannot operate as a drain any more than the cast-iron distribution pipes of the water-works system. Porous walls or a sufficient number of openings into the conduit are essential to *drainage;* whereas for the conveyance of *sewage,* absolutely water-tight pipes and other structures are generally recommended by engineers. The Water street sewer has apparently been built upon the latter plan without reference to the admission of the sub-soil waters, and hence the complaint that the cellars are damp and unhealthy.

To remedy this condition of the soil, drains are required instead of sewers; and to advise in what manner such drainage can be effected with the least reasonable expense necessitates the collection of the data recommended above to be procured, since it might, perhaps, be found advantageous to intercept a portion of the sub-soil waters at other points than in Water street.

Relatively to the subject of the pollution of the Owasco outlet by the sewage of the city, as submitted by Dr. Gerin, I would prefer to hear what evidence the health authorities had in their possession before venturing to express an opinion; and I regret greatly that on the day appointed for my investigation, the misunderstanding already referred to prevented me from meeting Dr. Gerin and his associates. Before proceeding further in this matter, therefore, I will await your instructions.

In conclusion, permit me also to express my indebtedness to Mr. Chas. L. Sheldon and Dr. Dimon for many courtesies and the data stated above.

Respectfully submitted,
EMIL KUICHLING,
Civil Engineer.

It is worthy of notice that the village of Batavia sought from the last Legislature the passage of an act permitting it to apply for the appointment of a commission whose duty it should be to cause the necessary surveys and plans for a system of sewers, to be prepared and laid before the citizens for consideration and final approval; but it is to be regretted that the bill was introduced too late in the session to have been made a law. The city of Hudson, also, is deserving of great commendation in having acted promptly upon the advice of the Board, and secured the services of a competent engineer, who, in conjunction with its city engineer, presented to the mayor and common council a well-devised plan for the sewerage of the southern half of the city.

[G.]

REPORT ON PREVALENT DISEASES.

Diphtheria.

This disease has continued to be one of the most annoying and destructive of any which afflict families in this State. It is, in the worst sense, a domestic pestilence; and the sanitary warfare against it has to be waged as against a subtle enemy of the household wherever it may make its appearance. No family or group of children is safe for an hour in the presence of a patient with diphtheria. This view of the danger that lurks wherever an outbreak of diphtheria occurs is based upon something more than the mere possibility of the infectiousness of the contagion that may spread from the sick person; for wherever there is an outbreak of this sickness, there is presumed to be some factor of causation not less important than that which may inhere in the infected particles or emanations from the sick.

It is not a theory or hypothesis which health officers and medical practitioners are dealing with, when they proceed to direct that the well shall be entirely separated from the sick, and that even attendants upon the latter shall also be separated from children and ordinary personal intercourse with households. It is plainly a matter of fact that is thus being recognized and provided against, under sanitary rules; namely, the fact that by some means and particularly by the breath or exhalations from the mouth and nostrils, an infecting cause of this specific malady is most liable to be communicated to other persons in the sick-room and to those who are exposed to the utensils, towels and clothing taken from the sick one.

Whatever be the separate and combined physical factors concerned in the causation of diphtheria, the practical sanitary lessons taught concerning the causation and means of prevention of this malady are not difficult to learn or obey.

In the first two annual reports of this Board, the record of current events in the sanitary care of diphtheria received some attention, and awakened great interest throughout the State. In this report the statements shall be as brief as possible, and the facts given will doubtless be estimated at their proper value.

As shown in the text of the Board's report this year, the total number of deaths from diphtheria in the cities of New York and Brooklyn in 1881, was 3,410, or about six per cent of the total mortality. At this rate, were the disease as prevalent in all parts of the State as in those two cities, not less than about 6,000 deaths were caused by this disease during the year. Though the statistics are not yet before us for the entire State, it is believed that about 5,500 deaths occurred form diphtheria during the year 1882.

Diphtheria in Canajoharie, Palatine and other places in the Mohawk Valley.— For months, in 1881, the Mohawk Valley was almost constantly afflicted by the presence of this disease. During the past two years, it has been necessary to inquire into some of the causes, which may be mitigated or prevented.

The following statement relating to the two special causes found to be in operation in the old town of Palatine will not surprise those who are familiar with the practice therein stated, concerning the morbid and unreasonable exhibitions, by which the living expose themselves needlessly to the dead and to the unhealthfulness of apartments in which the remains of the dead are laid for two or three days ensuing after death. A town health officer writes:

"I have waged a sanitary warfare against exposure to the sick in this disease; but up to the last few cases, isolation of the sick has been an utter impossibility, owing to the stubborn opposition of the family. The dwellings as a rule have very bad sanitary surroundings, and their school-houses are no better. Barns are located on ground from two to thirty feet above the dwellings, barnyards left in the most filthy condition two-thirds of the year. Cellars are wet and undrained. Hog-pens in close proximity to dining-rooms and family wells. Privies uncleansed, some for as long a period as ten years. The subsoil, slate and surface water and often the privy drainage and barnyard soakings run into the wells used for culinary and drinking purposes."

To the great credit of the religious teachers in that region, we are able now to testify that upon being informed by the State Board of Health that the practice of visiting infected sick rooms under the guise of religious and filial sentiment should be regulated or prevented, they have successfully exerted their influence as requested to prevent these evils; yet among the inhabitants that have never for generations given heed to sanitary regulations concerning malignant diseases, the sanitation of sick-rooms, and the remains of the dead, it is natural to find, as we do, that there are numerous causes which tend to perpetuate the infectious attribute of diphtheria in the regions here mentioned.

It is not doubted that along the rich bottom lands of the Mohawk and its affluents there may be local causes inhering in the soil favored by certain conditions of the atmosphere, which aid in perpetuating the prevalence of diphtheria, but this is something yet to be proved, if it is true. Already within a period of eighteen months the prevalence of this disease has been measurably repressed.

Palatine.—"*P. S. & R. Group.— Three neighboring families.*— Anna P., aged 14, daughter of a farmer residing in Palatine, attacked December 26, 1881. The sanitary condition of premises bad; damp cellars, poorly drained about the house ; surface water running into well.

"Mr. and Mrs. P., parents of Anna, contracted same disease December 29. Mrs. S., a neighbor, who nursed the sick in Mr. P.'s family, was attacked January 1, 1882. A sister of Anna P. was also prostrated January 7, and suffered dangerously.

"A daughter of Mr. R., another neighbor, who was constantly in communication with the P. family, came down with the same disease January 16 ; on the 5th of February her sister, and on the 25th and 26th, her father and mother were attacked and suffered severely. This group of nine cases occurred within a period of two months.

"*Second or S. Group.* — A child, 9 years of age, was attacked April 11, 1882. The house had unclean surroundings. The physician in attendance reports that within five years there had been four outbreaks of this disease in that house. April 12, another child in the same family was attacked; April 13, a third, and April 14, the mother herself. On April 20, the nurse and a young man helper, twenty-six years of age, came down with a severe attack. The children in these families were kept from school for two weeks following the recovery of the last case. The physician in attendance says : "I am fully convinced that among the rural population, local causes play a very important part in the production of this disease; and also that where the disease manifests itself in a family from a local cause, that if the first one taken down is properly isolated from the rest of the younger members of the family, and put upon a proper prophylactic treatment, the disease can then and there be arrested, nipped in the bud. I have long noticed that where the disease originates from local causes, the constitutional symptoms are much more prominent in the commencement of the cases than they are in those who catch the disease from exposure to them but have been living under better sanitary surroundings. In these latter, the throat symptoms are more prominent in the beginning."

Schuyler Lake. — The secretary of the board of health of the town of Exeter, Otsego county on the 25th of April, 1882, reported that in the hamlet of Schuyler Lake, three cases of diphtheria occurred, two proving fatal, on the 21st and 22d of that month. The health officer reported that crowded public funerals were held, and that people came to attend them distances of seven miles, from all the country round about. The local conditions that promoted this fatal outbreak were promptly removed, and orders were given for the enforcement of the necessary sanitary regulations.

In Patterson, Putnam county.— During the month of July a case of diphtheria occurred in an uncleanly dwelling-house, where three children died in rapid succession. In a neighboring family that was in constant communication with the sick family one fatal case occurred. The first dwelling was required by the town board of health to be renovated, and among other things it was directed that the cellar, which was in a dangerously foul condition, should be cleansed and filled with fresh earth.

Canajoharie. — In Canajoharie several cases of diphtheria occurred, late in the autumn of 1882. There were five distinct centers of the disease. The cases were isolated and the premises so cleansed by the health officer, Dr. Simmons, that the spread of the malady was effectually repressed.

Glenville.—In the north-western border of Schenectady county there was an outbreak of diphtheria in September and October, 1882, which threatened much harm until the local authorities brought sanitary regulations to bear. It appears that the outbreak commenced among families in the eastern part of the town of Amsterdam, Montgomery county, and gradually extended eastward from family to family, and, as now seems probable, aided by the attending physician, who says in reporting the cases: "The fact of contagion seems probable, and in two families it is clearly made out; but before the disease ceased to spread the contagious connection ceased to be traced.".

Schroon and other mountain towns in Essex county.— While diphtheria proved to be nearly extinguished along the northern border towns of Essex county, where it had been very fatal in 1881 and the beginning of 1882, it prevailed fatally in the mountain towns of that county at various places, and the board of health of Schroon deemed it necessary to adopt strict sanitary regulations to prevent the further spread of this disease in and near the village of Schroon Lake. The result of the effort has seemed to be entirely successful.

Salamanca.— In two successive years, diphtheria appeared in Salamanca under circumstances that threatened much harm; but by timely action of the local board of health its spread is reported to have been successfully and completely controlled.

The local board of health placed in every family a printed page of sanitary rules to be observed, which greatly aided and expedited the good result.

Scipio and Fleming.— Early in the autumn, the health officer of Scipio, after three fatal cases occurred in the neighboring town of Fleming, reported the necessity of action being taken in that part of Cayuga county to prevent the spread of the disease.

Summer Hill.— During the month of October the spread of diphtheria became so threatening that it was necessary for the local board of health to appeal for aid and advice of the State Board, to instruct the people in their duties for preventing the disease.

Walton, Schoharie county. — In September an outbreak of fatal diphtheria was reported in the family of a well-to-do farmer. The first case was of a son just returned from college. He died, and the father who was constantly attending upon him was fatally attacked. Sanitary measures were adopted in the house and in the neighborhood. There was no further spread of the malady.

Amsterdam. — On the night of December 2nd, an emigrant's child died at Amsterdam. The emigrant had left the ship *Gellert*, the day before. The parents had buried one other child at Castle Garden. It has been ascertained that upwards of thirty cases of diphtheria occurred on board the steamship *Gellert* during the passage from Hamburgh. The health officer of Amsterdam reported five cases of diphtheria traced to exposure to this emigrant family. The health officer at quarantine reported that the records of the ship show that there were many deaths on board that ship during the passage to New York.

Broadalbin and other towns of Fulton county. — The physicians and health officers in this county have evinced great interest in sanitary regulations for repressing the spread of diphtheria, though some of the older physicians have been slow to adopt these measures. The mode of procedure here mentioned by Health Officer Thorne is well-sustained by all intelligent people. That officer writes:

"No public funeral will be allowed, and as soon as practicable the places shall be fumigated with sulphur."

Morris, Otsego county.— At various times the health authorities in the town of Morris, who were first convened and organized in the autumn of 1880 for the purpose of advising and directing the people in the sanitary care of diphtheria, have reported the appearance of this disease, and the procedures of the local board to suppress it. The last of these reports relate to a factory hamlet, a mile and a half south of the village of Morris. Their sanitary orders and procedures have been worthy of imitation.

Diphtheria in schools and colleges.— Though commonly considered an infantile disease, diphtheria is so exceedingly fatal in children and youth and even in adults, and the consequences which may follow in any who survive, are in numerous instances so serious, that it should not be in any case considered a light or unimportant malady.

That great gain to life has been made in the sanitary measures adopted in school districts and in families throughout the State, in regard to the care required to prevent the spread of this malignant disease, begins to be evident. Not infrequently it has occurred that local causes little suspected have been discovered in and about the dwelling-houses, schools, workshops, and in one instance at least in a university building, where under the sanitary advice and prescribed measures of the health authorities, its spread has been prevented. During the past year there has not occurred in the State any such destructive spread of diphtheria through whole townships or villages as was witnessed in numerous instances during the previous two years, and in the judgment of local boards of health the gain in this respect in some of the counties has been justly attributed to the general adoption of regulations based upon the Sanitary Paper known as Circular 13.

The common opinion upon this subject and concerning such evils is entitled to respect, though the causation of diphtheria is incompletely explained. The progress made in this field of medical experience and inquiry must continue to be regarded with intense interest, and the fact already appears that the investigations made through agencies of the National Board of Health into the causation and controllable circumstances of the propagation of diphtheria is regarded with thankfulness by the medical profession and educated classes throughout the country. Researches such as undertaken for the National Board of Health, by Drs. Formad and Wood, should be continued by investigators wherever opportunity is afforded.

DIARRHŒAL DISEASES.

The summer diarrhœa of infants and children destroys such vast numbers in the crowded cities, and in some of the manufacturing villages, that a systematic investigation concerning such causes as are found to be preventable has been commenced. Further reference to the subject in the present report, therefore, need not be made. The record of deaths by infantile diarrhœas in New York and Brooklyn alone during the four months of the warm season during the past year, and during the previous ten years, present sufficient reasons for investigating the preventable causes of fatal diarrhœal diseases within the State; for though there are localities and classes that suffer little or nothing from these diseases, there are modes of housing and of domestic living which seem inevitably to invite and make certain the presence of this agency of filth and foul air, as the most ruthless of all destroyers of the lives of young children.

Under this head, one of the cases to be reported, for the special instruction it conveys, is that at Knowlesville, in the town of Ridgeway, Orleans county. It was supposed to stand apart quite distinctly from ordinary filth diseases, because it occurred in a community where every household was presumably secure against the common sources of the diseases that are bred of filth. The disease extended throughout the little village without any suspected cause until advice was received from this Board to discontinue using the well waters that furnished supplies to the families in which the sickness was occuring. The President of this Board after visiting the locality concluded that the sickness had a communicable infectious factor by means of the discharges from the bowels, and that the wells or soil had been active agents in propagating the causes of the disease. The well waters were immediately analyzed by Prof. Lattimore, on request of the President of the Board.

The report of the analysis shows nothing more remarkable than the presence of an excess of chlorides, and of the carbonates of lime;* yet several facts are worthy of record here. There were twenty-one cases of dysentery, eight being fatal. The disease was of an obstinate kind, and prevailed rather as a house epidemic than as a general one in the village. In the households which suffered most, the water used for domestic purposes was taken from wells near an open ditch, which had become obstructed and foul. Each of the wells terminates upon the floor of Medina sand stone that underlies the region only a few feet below the surface.

The porous ground was permeated by the offensive ditch-water, and was believed to have become an active contributing cause to the epidemic. A child that had arrived from one of the western States, sick of dysentery, chanced to be domiciled in the house where the disease soon attacked most of the family, in which four deaths occurred. The well of water used by the family, and by those families who next suffered from the same sickness, was found to be the most impure of all the wells in the village, which Prof. Lattimore examined. It is marked in the list of waters examined, as "No. 4, Knowlesville." This well is under the house, and was accused of causing other sickness than dysentery.

The third case of dysentery that occurred was attributed to not only the intercourse with the second case, but to a special exposure to excremental matter from the latter.

From the first three cases, the disease seemed to extend in such manner and to afflict only such persons as the final study of the occurrences presumably warranted the physicians in concluding that there was a communicable factor of causation; and that a specially defiled condition of the well waters which chemistry certainly has not fully defined, if it has detected it at all, was the most important agent in the causation of the epidemic. One of the wells most feared was closed; others were cleansed, but it was during a period of drought when the use of such wells was perilous and should have been wholly prevented by substituting a safer source of supply in the neighborhood.

---

* See table of analysis in Report on Water Analysis, p. 100.

Another instance to be reported is that of an epidemic of choleraic diarrhœa, or winter cholera, which made its appearance in December in the city of Binghamton. The facts thus far ascertained are briefly as follows: Dr. John J. Orton acting for the State Board of Health, with whom this Board associated Dr. H. D. Wey, of Elmira and Drs. Richards, Burr and Putnam of Binghamton for the purpose of pursuing careful investigation into the causation and nature of the outbreak, made a preliminary statement of the facts as follows:

"The diarrhœal epidemic which has prevailed in this city during the past two weeks has assumed the remarkable proportion of affecting, more or less, nearly the whole community.

"The outset of the malady is that of a general *malaise* for a few hours, soon followed by copious watery discharges from the bowels. Some cases are accompanied by great nausea and vomiting; some with pain in the epigastric region, and in the lower portion of the back and hips.

"There is great thirst; but no increase of temperature; pulse nearly normal; skin dry; tongue in severe cases coated with a heavy white fur; bowels not tympanitic nor tender on pressure. No deaths to my knowledge have thus far occurred from this epidemic. The duration of the malady is from forty-eight hours to a week. Patients suffer from much prostration.

"The geography of the epidemic must for the present be considered as confined to the city of Binghamton. Although there have been numerous cases occurring in the surrounding country, I have not been able to establish a well-defined case, unless the party had recently visited the city.

"The line of investigation which would most appear to afford a clue to the epidemic would be

"1. A careful chemical and microscopical examination of the water in the public wells supplying the city.

"2. The same examination of the water of the Susquehanna river, from which a portion of the supply is taken.

"3. An investigation to determine to what extent the refuse from tanneries using raw fresh hides, and sewers emptying into the Susquehanna river some miles above the water-works may impair the water for drinking purposes.

"4. What deleterious emanations may arise from the lower catch basins throughout the city, and what from the refuse of the sewers as they empty into the rivers at their present extreme low-water mark.

"Other lines of investigation will doubtless suggest themselves as we proceed in the work of examining into the causes of this peculiar epidemic. For the present, we can only labor to secure reliable facts regarding it, and await the results of the chemical and microscopic analysis."

The Board requested one of its sanitary engineers, Mr. Kuichling, to join the physicians in their investigations and to report immediately whatever could be usefully recommended to the local sanitary authorities and the people of that city. Among the facts reported by him the following are especially important in the history of the outbreak.

ROCHESTER, N. Y., *January* 29, 1883.

To the President of the State Board of Health:

* * * * * * * * * * *

"On December 26, 1882, a severe diarrhœal epidemic broke out in the city and affected a large number of residents of all classes of people. Strangers visiting the place were also seized with the malady after a short sojourn either in hotels or in private dwellings, and the outbreak could, therefore, not be attributed to defective drainage and other kindred causes, on account of its universality. Suspicion accordingly fell upon the public water-supply, especially in view of the fact that in consequence of a long-continued drought the yield of the wells at the pumping-station had proved inadequate to meet the demands for many weeks previously, and that the pipe leading into the wells from the river had been kept open more or less during this whole time.

Careful investigation by the local physicians fully justified this suspicion, as it was soon demonstrated that nearly every person affected with the prevalent diarrhœa had partaken of the water from the city mains, and that in only a few out of the large number of cases could any other rational cause for the illness be assigned. Measures were, therefore, taken by the water-works authorities to test the question as to the quality of the unfiltered water that was being pumped into the distributing pipes, and urgent requests were made to the citizens to be as economical as possible in the use of the water so that the river connection could be closed and the supply be derived from the two large wells alone. This change in source was at length effected at three o'clock on the afternoon of December 28, 1882; but as the offensive water already in the mains was not at first thoroughly removed, and was, therefore, only diluted with the purer water from the wells, no marked alteration in the health of the community was immediately perceived. In a few days afterward, however, a noticeable improvement became manifest, and on January 10, 1883, the epidemic was practically over, after a run of about fifteen days."

* * * * * * * *

"The pumping station of the Binghamton water-works is located near the eastern boundary of the city, and on the north bank of the river, at a point considerably above the outlet of any public sewer. The ground is here a broad alluvial flat, somewhat below the general level of the city, and extending northerly to the base of the hills and easterly for a long distance. For a depth of about twelve feet below the surface, the soil is loamy; but following this a substratum of fine river gravel, of indefinite thickness, is encountered, which extends throughout the entire low district. The engine-house is built about 120 feet from the low-water margin of the river, and on each side of the structure a large circular well, twenty-five feet in diameter and twenty-two feet deep, has been sunk down into the underlying gravel, so that the bottom of the wells is about seven or eight feet below the usual low-water surface of the stream. These two wells are lined for their entire depth with a wall of stone-work, laid up with water-lime mortar, and coated with a suitable layer of cement, and they are furthermore connected together at the bottom by a small masonry culvert. It will, therefore, be seen that the water in the wells comes only from the stratum of gravel and that its level is the same in both.

* * * * * * * *

"Soon after the establishment of the water-works, however, the demands for consumption became greater than the yield of the wells in dry seasons, and the attempt was made to increase the supply by driving a series of iron tubes, varying from 1½ to 6 inches in diameter and from 8 to 28 feet in length, down into the gravel bottom of the two pits; but as the quantity still continued to be insufficient in cases of emergency, a direct communication with the river was made about eight years ago by means of a 14-inch iron pipe, which extends from the culvert connecting the two wells out into the middle of the stream, and is provided with regulating valves for governing the quantity of unfiltered water thus admitted. The plan was to make use of this pipe only in cases of extreme necessity, such as when a large additional volume of water might be required quickly for the suppression of fires, or in times of unusual drought; but as has already been mentioned, the pipe was used to furnish a supplementary amount continuously for several weeks preceding the outbreak of the epidemic. The water thus obtained is pumped by steam power directly into the net-work of iron distributing pipes without any subsequent treatment whatever, and is taken therefrom by the consumers, the majority of whom are unprovided with private filters; so that the most of the water used for drinking purposes in the city, while the direct connection pipe remains open, is merely the river water diluted to some unknown degree with that which percolates through the gravel.

* * * * * * * *

"Proceeding up the river we find within a distance of about two miles from the pumping station of the city water-works the following sources of pollution: 1. At a distance of nearly one-half mile a sewer from the Susquehanna Valley Orphans' Home; 2. At a distance of about one and one-half miles a privy used by the engineer and firemen of the pumping and steam-heating station of the insane asylum; 3. At a distance of about one and seven-eighth miles the partially filtered sewage from the asylum buildings on the hill above; and 4, the presence of large quantities of eel-grass and fresh-water algae in the channel of the river for nearly a mile in length in the vicinity of the asylum pumping station, and along the shores farther down. These various sources of defilement will now be considered in the order stated above.

The Susquehanna Valley Orphans' Home has at the present time 120 inmates, consisting of 108 young children and twelve officers and attendants. It is supplied with water from the city mains through a special pipe, and is provided with two water-closets, which are used daily by about twenty-eight persons, the children ordinarily using an outside privy. This latter is built over a tight masonry vault, which can be connected with the general sewer from the main building by removing a plug; but from the statements of the superintendent the plug is kept in place and the solid contents of the vault are removed by manual labor about once per year, and used as a fertilizer upon the garden lands belonging to the institution. After the vault has been emptied in this manner, however, the connection with the sewer is opened, and the vault is then thoroughly flushed out with water, which runs off through the sewer into the river whereupon the plug is again replaced. This annual cleaning is undertaken only during floods in the stream, so as to avoid defiling the city's water supply with these filthy scourings. The sewer is constantly used, nevertheless, for the removal of all the common kitchen laundry and water-closet wastes of the establishment, and it discharges its contents upon the sloping bank of the river near high-water mark, so that in dry seasons a large mass of organic filth accumulates on the shore and is swept away by freshets. It may also be mentioned that a number of cases of epidemic diarrhœa occurred among the children and the attendants, but they were all quickly relieved by the administration of common household remedies.

* * * * * * * * *

"From the foregoing it is now manifest that the specific cause of the recent epidemic in Binghamton should be looked for in the water of the Susquehanna river, since within the comparatively short space of two miles above the inlet to the city water-works, four distinct sources of pollution have already been pointed out. But in addition to these direct and constant defilements, we must also take into account the accumulations of organic matter in various forms and conditions which collect during seasons of drought; first, upon the rocky bed and margins of the asylum gully and on the river shore in its vicinity; second, upon the stems and leaves of the dense mass of eel-grass described above; and third, upon the bank and shore of the stream at the mouth of the sewer from the Orphans' Home. All of these accumulations are probably detached and washed away from the places where they have been lodged during a heavy rain-fall and a consequent slight rise in the river, so that at such a time the constant pollution of the water may be largely increased for a short period. In view of these considerations, the fact is now worthy of special notice, that after a severe drought continuing throughout the entire autumn, a rain-storm, accompanied with a slight freshet in the river, did actually occur at Binghamton a few days before the outbreak of the epidemic; and it is, therefore, highly probable that the water of the stream was then charged with a much greater amount than usual of organic matter, and that the impurities were accordingly pumped into the city mains."

Respectfully submitte

EMIL KUICHLING,
Civil Engineer.

The Binghamton sickness terminated during the early weeks of the present winter, without any fatal results so far as can be ascertained. The causation of the epidemic, however, is still under investigation, because it was ascertained, before the sickness had ceased, that at various places in the Chemung and Susquehanna valleys, and as far southward as Towanda, Pennsylvania, and as far westward as Steuben county, physicians report the same kind of obstinate and prostrating diarrhœa which they were unable to trace to any cause. Therefore the committee that began to investigate at Binghamton has continued its work, and will be aided by Dr. Wey as a microscopist and naturalist, and by Engineer Kuichling.

Several samples of the public water supply of Binghamton have been analyzed by Prof. Tucker in the course of this investigation, and he reports that they are of fair purity, and "that the analysis does not furnish any evidence to condemn the chemical qualities of the water."

The long-continued drought is believed by the reporters to be an essential factor in connection with the causation of this sickness; but the particular nature of this factor of cause remains undiscovered. Fortunately, it did not produce fatal effects. Drs. Orton and Wey are to continue their investigations of this outbreak and extensive prevalence of "winter cholera" and report results at a future time.

Typhoid enteric fever.— House epidemics of the filth fever, which is, in the common nomenclature of the people as well as medical practitioners, termed typhoid fever, has been reported in certain instances that are of sufficient importance to require an investigation by this Board. The most troublesome center of this kind of sickness known at present in the State is in and near the village of Amsterdam, which, prior to the introduction of the public water supply, has depended solely upon the surface wells for domestic purposes. Little evidence has been presented that the disease prevailing in this district has any infectious attribute. The polluted well water in all cases, and filthy, sodden grounds surrounding the public yards and the accessories of dwelling-houses, have an obvious and indisputable relation to this sickness.

There has been one instance of house-epidemic in a hamlet near Amsterdam where causes of sickness which jeoparded the lives of all the inmates were investigated with reference to causation, and with the result of finding a condition of dangerous plumbing and drainage which is here briefly narrated.

The epidemic at Indian lake, Hamilton county.— A fatal epidemic of typhoid fever was reported as prevailing, late in the autumn of 1881, in the vicinity of Indian lake, and mostly within the town of that name, and in the north-western part of Warren county. Upon investigation it was ascertained that the fever had proved very fatal, thirty deaths having been reported, and that it belonged to an exceptional class of fevers, and would properly be designated as typho-malarial.

Occurring as it did in one of the most salubrious and favored of the lake districts of the Adirondack wilderness, it was deemed important to determine the nature and extent of this calamitous visitation of sickness. The testimony obtained in writing is in the following terms, and is deemed a correct judgment upon the facts as observed and studied by one of the most intelligent observers among the residents in that region:

"The undersigned, a resident and citizen of said town, respectfully represents that he has resided in said town for the last thirty years.

"That up to and within the last three years this has been a very healthy locality.

"That within the last three years, and more especially the last year, there has been a great amount of sickness in different parts of the town and much suffering from 'malarial fevers,' especially that which is known as typhoid fever.

"That physicians are agreed that a very prolific cause of such disease is the flooding and drawing off the water of Indian lake by means of a dam erected at the outlet of said lake.

"That the water has been recently so drawn off and several hundred acres of lowlands and marshes are left uncovered, causing stench and miasma to the great damage of the health of this community.

"That the dam at the outlet of the lake which is the source of the trouble is directly controlled by parties at Glens Falls, N. Y., and indirectly controlled by Mr. —— of Indian Lake, N. Y.

"That such dam was constructed and has been maintained for many years for lumber purposes, that is, for floating and flooding timber."

(Signed,) W. W. LOCKE.

The following facts were communicated by Health Commissioner Brooks, who inspected the place while on a visit to Blue Mountain, in the town of Indian Lake, after the local board of health had organized.

"Having examined the alleged causes of the calamity complained of by citizens of the town of Indian Lake, in a memorial presented to the State Board of Health on the 11th of September, 1882, stating that serious damage has been caused to the health of the people by the draining off of the waters from the lake, producing thereby sickening emanations from decayed vegetation and dead fish, dangerous to the health of the people; it appears that late in 1881 more than thirty deaths occurred which the petitioners and other observers trace to the causes complained of. The water is drawn off from the marshes in the interest of the lumber trade. There is a flow for lumber for about ten of the fifteen miles along the waters covered by the lake. One effect of this in connection with insufficient or badly regulated dams has been the withdrawal of water from the overflowed borders of the lake, thus contributing to the typhoid and miasmatic fevers and fatal diphtheria which resulted.

"It is believed a new dam could be built which would retain the necessary covering of water over the marsh land now exposed late in summer. The insufficiency of the present dam makes the new work necessary. This would add several feet of water by preventing it from being drawn off in the interest of the lumber trade and at the expense of the public health. What is needed is the proper supply and uses of the water, which is now denied by the improper draught upon it in the hot weather to make a flow for lumber, which in the opinion of the undersigned is not necessary.

"The local board of health and other town officers being fully acquainted with the chief causes of the evil complained of (in whose statement the committee of the State Board concurs), ask leave, preliminary to any complaint to the Governor of the State, to make their statement to the company now controlling the lumber trade of Indian Lake. They do this in the belief that what is asked for ought to be done, can and will be done in the interest of the people who have suffered so much in the past, and who are apprehensive of the continuance of the same evils in the future, if the cause is not at once removed.

ERASTUS BROOKS."

The town board of health of Indian Lake, in its last communication to the State Board makes the following statement:

To the Honorable the Board of Health of the State of New York:

"We, the undersigned, composing the town board of health of the town of Indian Lake, in the county of Hamilton and aforesaid State, respectfully represent to your honorable Board:

"1. That in the fall of the year 1881 and during the winter and spring of 1882 there was a great amount of sickness — followed in some cases by the death of the sufferers — from typhoid fever.

"2. That the physicians who attended and treated the sick were agreed that the direct cause of such disease was the draining off of the water in Indian lake, and leaving several hundred acres of lowlands and marshes uncovered and exposed to the sun in the hot seasons of the year, to-wit, in the months of June, July, August and September.

"3. That the water has been so drawn off in the month of August, 1882, and such lowland and marshes are now exposed to the heat of the sun, causing a disagreeable stench and forming a green scum over the uncovered bottom lands, which physicians declare to be injurious to health and liable to create malarial fevers.

"4. That the dam at the outlet of said lake was constructed by a company having their office at Glens Falls, N. Y., and has been maintained by said company and directly controlled by such company and indirectly controlled by a representative at Indian Lake, N. Y.

"5. That the remedy for the evils complained of is, first, to leave the water in said lake to run its natural course; or second, to draw the water off early in the season and let it run until freezing weather; that is, the 1st of October; or third, erect a dam of sufficient capacity or height to afford the amount of water required with a "trip sill" sufficiently high so as to leave the lowlands and marshes covered with water.

"For the Board of Health of Indian Lake.

"ANGELO TRUESDELL, *Supervisor.*
"C. D. GILSON, *Town Clerk.*
"W. W. LOCKE, *Citizen.*"

Typhus fever. — As shown in the Board's Second Annual Report, true typhus gained access to lodging-houses in the city of New York early in 1881, and as shown in the report upon it by assistant sanitary superintendent, Dr. E. H. Janes, the disease was kept effectually subdued, though it maintained a few lurking-places in lodgings and tenement-houses. In August, 1882, it was discovered that typhus existed in some of the lodging barracks of the Italian laborers on the New York and West Shore railroad. Four deaths occurred in one of those shanties which the coroner certified as having been caused by typho-malarial fever. A few of the sick laborers who returned to the city of New

York from time to time in August and September, arrived either already dead of the fever, or with its pathognomonic signs well marked. It was deemed expedient to make a rapid sanitary inspection along the entire line of the West Shore railroad laborers' lodging-houses, from Haverstraw to Utica. The result of that inspection proved that not more than five centers for the propagation of that disease had been established, and that the contractors and foremen in charge of the laborers would heartily coöperate in the sanitary renovation and regulation of the lodging-houses and barracks occupied by the laborers.

A brief memorandum of sanitary instructions was issued for use whenever it was believed that the typhus contagion was liable to be propagated in any part of the State. The means of exposure were such wherever the railroad laborers were moving, that this mode of giving sanitary counsel seemed very necessary. This is illustrated by the last*, as well as all the earlier cases, reported from the city sanitary authorities to the State Board. The memorandum was in the following words:

STATE BOARD OF HEALTH OF NEW YORK.

Warning against typhus.— The typhus contagion, which is being spread by railway laborers, threatens much harm. The local boards of health in the 326 villages and the 947 towns and 24 cities of the State should require their health officers to be watchful and ready to adopt all necessary sanitary precautions for isolating and controlling this disease at its first appearance. Tramps should not be permitted to enter dwellings and lodging-houses, as they wander about. They should be cleansed and controlled by superintendents of the poor. Sanitary officers should order whatever is necessary. Every typhus patient should be so quarantined and provided for as to prevent the spread of infection. All lodging-houses and dwellings where fever is suspected should be thoroughly cleansed; and wherever a case of typhus occurs the disinfection of the clothing, bedding and sick-rooms should be as prompt and thorough as in cases of small-pox. The sick and whatever pertains to them, as well as the remains of the dead from contagious diseases, must not be removed from one place to another without written permission of all the health boards of the several places.

ALBANY, *Aug.* 30, 1882.

ELISHA HARRIS, M. D., *Secretary*.

The following extracts from reports of medical inspectors at the time illustrate the situation of affairs with which the Board was then dealing. Dr. Govan, of Stony Point, under date of September 4, writes:

---

*Dr. E. HARRIS, *Secretary State Board of Health :*

DEAR DOCTOR — Michael Rona, an Italian, came down from Cornwall by rail last night and died in the Chamber street ferry-house. I learn that he was employed on the West Shore road, but can find nothing else about his history. The man who came down with him I have not been able to find. Rona had an eruption. Petechial, on the abdomen, thorax and arms and probably died of typhus fever.

Respectfully,

WALTER DE F. DAY, M. D.,
Sanitary Superintendent.

"Dear Doctor — In compliance with your commission I have inspected all the lodging-houses and shanties occupied by the laborers on the proposed railroad, from the north line of our county south to the old Conger Mansion in Clarkstown. In all I found thirty-two lodging places in Stony Point. Seven were occupied, packed with Italians in a most filthy and abominable condition. Many, if not all, had no outhouse, and surrounding one I found the ground for acres around almost covered with human manure. The houses had no chimneys, fire on the middle of the floor and smoke going all around. The stench was overpowering. Six of the shanties were occupied by colored men, and were but little better than the others. The men slept on old rags, without beds, pillows, or even straw."

Dr. Curtis reports on the 5th of September:

"I have spent three days inspecting from Little Falls westward. None of the lodgings are clean, all are full of litter, many are filthy, some indescribably so. Many are newly-constructed buildings of the roughest character, others are outhouses hired of resident farmers, or old disused dwellings. The latter are usually by the roadside, the new structures being, as a rule, remote from the resident population. In these they are packed very closely, more than one hundred men often occupying a building twenty-five by forty feet in size. The habits of the lodgers are exceedingly filthy. Latrines if provided are seldom made use of. Refuse and slops are deposited indiscriminately about the surroundings of the house. Food is mostly of flour manufacture, maccaroni, bread and a little bacon. The cooking is of the most primitive character. Water is obtained from neighboring wells or creeks. There appears to be comparatively little sickness amongst them. They are generally inoffensive and law-abiding and are faithful laborers as a rule. In all sanitary respects they improve on residence for a season in this country. Their characteristics as observed along this line of the road are quite the same as noted in the vicinity of Albany and down the river to Catskill. On the West Shore line the contractors and division superintendents report between 5,000 and 6,000 Italian laborers at present employed through the central part of the State."

The occurrence of typhus in a charity lodging-house of the better kind in East Twenty-eighth street, New York city, justly awakened great interest in results that would follow the prudent dispersion of the crowded inmates of that place and the sanitary care of them at the new hospitals on the North Brothers' Island. The prompt action of the municipal board of health in thus disposing of nearly a hundred children and their devoted caretakers, the Sisters of St. Stephen's Home, will warrant a report of the results, at a future time, by this Board. It is already known that the sickness has ceased, and that none of the children have died, though some of the sisters have.

An example of results, following sanitary inspection to discover causes of prevailing sickness.— Infections of the kind from which children mostly suffer, namely, scarlet fever and diphtheria, had been for many months reported as being obstinate and as continually reappearing in different parts of the village of Pleasantville, town of Mount Pleasant, Westchester county. The health officer of the town, Dr. De-Hart, at the suggestion of this Board successfully undertook to trace out, with minute carefulness, the conditions under which these and other preventable diseases prevailed in the different households. The following are some of the noteworthy points: The faults of domestic hygiene are first in order. Second, the obstruction and consequent backing up of the water in the natural water-courses throughout the built-up portions of the village, chiefly the result of filling across and grading up, without culverting, the small natural streams and water-beds, which had their course outward into the Saw-mill river. The filling up of that river with silt and debris in the vicinity of the village; wet cellars and considerable swamp and water-soaked grounds in and near the village.

A careful inspection was made of 90 family dwellings, wherein were found 441 inhabitants, 265 of whom were found sick. The town health officer has submitted the following tabulated statement, showing the condition of each house in which sickness was found to prevail at the time of inspection:

Tabulated Exhibit of Sanitary Inspection.

House number. Street and names of occupants omitted.	Number of persons in family.	Number sick with miasmatic fever.	Source of water supply.	Direction of house from swamp ground.	Observations.
1	4	2	Spring n. dep't	South	House near swamp.
2	5	2	Same as No. 1	South	In a house till recently long unoccupied.
3	5	4	Same as No. 1	South	First story of house No. 2.
4	4	1	Same as No. 1	East	A case of remittent.
5	5	3	Rain	West	On crest of ridge; cellar wet.
6	6	1	Rain	West	Same as house No. 5.
7	4	3	Rain	West	Cellar of house Nos. 5 and 6.
8	4	1	Rain	West	Cellar, same house as Nos. 5, 6, 7.
9	4	1	Rain	West	Cellar, same house as No. 8.
10	4	3	Rain	East	Wet grounds about dwelling.
11	5	2	Rain	East	Wet basement and grounds.
12	4	4	Rain	East	Wet basement.
13	5	2	Rain	East	Wet basement on made ground.
13½	2	1	Well	East	Second floor of No. 13.
14	2	1	Well	East	Wet grounds about dwelling.
15	3	2	Well	East	Same house and floor as No. 14.
16	2	2	Well	S. East	Made ground and wet.
17	7	3	Well	E. & W.	Made ground; saturated from privy.
18	4	None	Well	E. & W.	Second floor of No. 17.
19	2	2	Cistern	E. & W.	House filthy.
20	3	1	Well	W. & N.	Grounds saturated; densely shaded.
21	4	1	Well	N. & S.	Grounds 30 ft. higher than No. 20.
22	3	2	Well	N., S. & E.	
23	5	3	Well	N., S. & E.	Low, wet and shaded.
24	32	8	Well	N., S. & E.	Dense shade; 30 boarders.
25	5	4	Well	N., S. & E.	Dense shade; wet grounds.
26	6	None	Well	N., S. & E.	
27	6	None	Well	N., S. & E.	On bank of river.
28	3	None	Well	N., S. & W.	
29	4	3	Well	South	Swamp in front.
30	2	2	Well	South	Same as house No. 29.
31	5	4	Sp'g on h'way.	W. & N.	
32	2	0	Sp'g on h'way.	W. & N.	Third floor of No. 31.
33	6	6	Sp'g on h'way.	W. & N.	First floor of No. 31.
34	2	2	Sp'g on h'way.	North	Swamp at the rear.
35	5	3	Sp'g on h'way.	North	Swamp at the rear.
36	2	None	Spring, clear.	N. & W.	
37	6	5	Well	N. & E.	Dense shade; swampy.
38	2	2	Well	N. & E.	Dense shade; swampy.
39	4	3	Well	N. & E.	Dense shade; swampy.
40	2	2	Well	N. & E.	Dense shade; swampy.

Tabulated Exhibit of Sanitary Inspection — (Continued).

House number. Street and names of occupants omitted.	Number of persons in family.	Number sick with miasmatic fever.	Source of water supply.	Direction of house from swamp ground.	Observations.
41	2	2	Well	N. & E.	Dense shade.
42	7	7	Well	North	Surrounded by swamps on all sides; dense shade.
43	6	6	Well	North	Swampy; drainage bad.
44	6	4	Well	North	Swampy; water-closet drains to well.
45	2	None	Well	North	Swampy.
46	3	2	Well	North	Swampy; water-closet offensive.
47	6	None	Well	North	....
48	5	3	Well	North	Swamp in rear.
49	4	4	Cistern	E. & N.	Swampy; water-closet in house; natural drainage bad.
50	..	..	....	E. & N.	Same as No. 49.
51	2	1	....	E. & N.	Same as No. 49.
52	4	None	Well	E. & N.	Swamp and pig-pen in rear.
53	8	3	Well	E. & N.	Swampy; front and side sandy soil.
53a	7	4	Well	E. & N.	Same as No. 53.
54	9	7	Well	E. & N.	Cellar low; swamp S. & W.
55	5	2	Well	E. & N.	Swampy and low.
56	4	2	Well	East.	Swampy; water in cellar.
57	4	2	Well	East.	Second floor No. 56.
58	6	2	Well	East.	First floor rear No. 56; water-closet 12 ft. from house in filthy state.
59	3	3	Well	East.	South end of large house.
60	5	..	....	East.	Defective sewerage, north end; 2 deaths.
61	..	..	....	East.	....
62	3	2	Cistern	East.	Swampy land.
63	2	2	Well	W. & N.	Swamps to the east; 1 death.
64	4	3	Well	W. & N.	First floor and basement of No. 63.
65	2	2	Cistern	W. & N.	Second floor.
66	6	6	Well	W. & N.	First floor; swamps east and south.
67	4	4	Well	W. & N.	Well lower than house.
68	1	1	Well	W. & N.	North end of No. 67.
69	8	7	Well	E. & W.	Ice pond in front; well lower than house; house lower than No. 66.
70	4	1	Well	E. & W.	Lower than 66; ice pond in front.
71	3	3	Well	N. & E.	Ice pond in rear.
72	5	5	Well	N. & E.	Pond No. 1 at rear.
73	8	8	Well	N. & E.	Pond No. 1 at rear.
74	4	1	Well	West	Swamp in front.

Tabulated Exhibit of Sanitary Inspection — (Continued).

House number. Street and names of occupants omitted.	Number of persons in family.	Number sick with miasmatic fever.	Source of water supply.	Direction of house from swamp ground.	Observations.
75	4	1	Well	West	Same as No. 74.
76	6	2	Well	West	Same as No. 74.
77	5	5	Well	E. & N...	....
78	30	23	Well	N. & E...	Swamp E., N. & W.
79	7	7	Well	N. & E...	Basement; Saw-mill river on south; 1 death.
80	6	6	Well	N. & E...	Same as No. 79, second floor.
81	3	3	Spring	E., N. & S.	Swamp land about house: 1 death.
82	6	6	Well	E., N. & S.	Same as No. 81.
83	4	1	Spring.......	E., N. & S.	Swampy: 1 death.
84	3	1	Well	E., N. & S.	Water from well No. 86.
85	7	7	Well	E., N. & S.	One death; water from well No. 86.
86	3	3	Well	East....	Side hill; well lower than house.
87	3	3	Well	E., N. & S.	Second floor; use well of No. 86.
88	4	3	Well	E., N. & S.	First and second floor No. 87.
89	4	3	Well	E., N. & S.	Boggy land under house; well lower than barn and water-closet.
90	4	1	Well	E., N. & S.	Water from spring No. 91.
Total.	441	265			

Note.— No. 91. A public spring (No. 1), Washington avenue, east side of highway; gets drainage from livery-stable; used by ten families; mostly surface water; rich in chlorides.

No. 92. A public spring (No. 2). Road to Sing Sing, side of highway; gets drainage of same. In line of natural water-course; supplies eight families.

No. 93. Public spring (No. 3), rear of No. 81 South street. In swamp; entirely surface and subsoil water; supplies two families.

No. 94. Private spring (No. 4), Harlem railroad; supplies tank-house and trough pipe, which may leak, thus soaking territory near 5, 6, 7, 8, 9.

No. 95. Pickle house (No. 1), Marble avenue, large swamp on north, natural drainage good, empty brine in swamp, lying on easterly side of Saw-mill river.

No. 96. Pickle house (No. 2), Rebecca avenue, 150 feet from dwelling; drainage from same under Harlem depot to Saw-mill river.

No. 97. Artificial pond (No. 1), South street; ice pond made by springs and surface-water; vegetation rank; outlet choked; not emptied in spring; several years' old.

No. 98. Artificial pond (No. 2), Tompkins avenue, recently constructed; in good condition; to be heard from at some future time.

No. 99. Private spring (No. 5), Mrs. Mills, in cellar; drainage away from house; no standing water; live up stairs; no sickness.

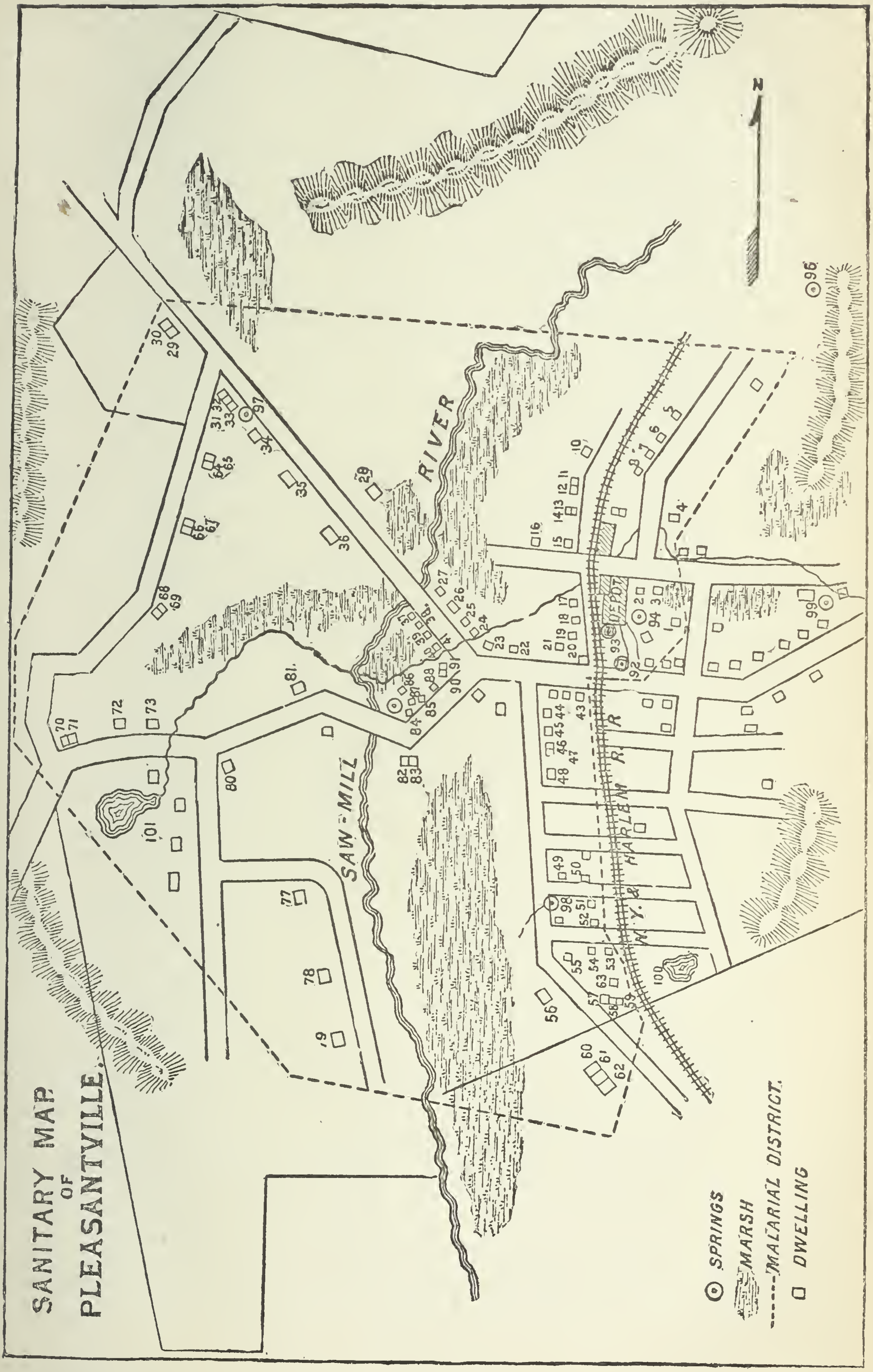
The annexed map shows the village as it lies upon the eastern or left-hand side of the Saw-mill river. The names of streets and of owners of dwellings are omitted, and simply the sketch with its few symbols presented in illustration of the inspector's notes.

In pursuing its work the local board of health sought the assistance of a committee of the State Board, and this was given by Commissioner Erastus Brooks, accompanied by Dr. Alfred L. Carroll, the Board's special investigator in the maritime district. Dr. Carroll briefly reported the results of that visit and conference with the people of the village in the following terms:

"This sparsely settled village is situated in a valley through which runs the Nepperhan or Saw-mill river, a small stream which constitutes the natural drainage channel of the adjoining slopes. Toward this stream tend several minor drainage valleys and water-courses, sufficient, if properly conserved, to relieve the soil. The geological formation is dolomite, thinly covered with drift, and, on the higher parts of the slopes, often quite bared, so that surface-water must descend rapidly upon the lower land. Moreover, several springs emerge from the side hills, adding their quota to the burden of soil-water. In the lower land a layer of "hard-pan" is found at about three feet below the surface, the impenetrability of which prevents downward soakage and necessitates increased care in preserving the natural descents. The level of the ground-water, as shown by wells in this part of the village, is about five feet below the surface, and is subject, as I am informed, to rapid and considerable fluctuations. Drinking water is obtained partly from public springs, in a few instances from rain-water cisterns, but chiefly from surface-wells in suspicious proximity to leaching cess-pools and privy-vaults.

"In the southern portion of the village, on the eastern bank of the river, lies an expanse of wet meadow, little higher than the level of the stream, which in this part of its course has its water raised and its current rendered sluggish by alteration and obstruction of its channel further to the southward. Nearly parallel to the river runs the Harlem railway, with much filled-in ground along its track, materially impeding the drainage of the eastern slope, and with insufficient culverts or none at all, where it crosses channels or water-courses. Finally, in several instances, faulty grading of streets interferes with the off-flow of spring or surface-water. The general conditions, therefore, are such as to favor soil saturation in the lower lands, notwithstanding the natural facilities for soil drainage.

"The principal etiological factor in the recent malarial outbreak, however, is to be found, I think, in the insanitary domiciliary arrangements throughout the infected district. The houses are built, a few directly upon damp soil, some upon side-hills with three sides of their basements partly or wholly underground, most of them with uncemented foundations and cellars, sometimes deeply flooded and always wet. In several cases, over-flowing cess-pools and privy-pits are



SANITARY MAP OF PLEASANTVILLE.

3d Report State Board of Health of New York.

dangerously near to, and on a higher level than, these cellars and the surface-wells which supply drinking water to the inmates, and of which a few, hastily tested at the time of my visit, yielded marked evidence of chlorine. In one group of infected houses on the western slope, these domestic agencies are abetted by the proximity of an artificial ice-pond, damming back much of the surface-water, and having at its sides and bottom a large amount of decaying vegetable matter, the level of which, as I was told, is frequently raised and lowered. The soil on the margin of this pond gave a faintly acid reaction. Subsequent examination of it, through "artificial marsh" and successive culture experiments, failed to reveal any micro-organisms resembling the alleged "bacillus malariæ," although it abounded in the ordinary forms of "scavenger-bacteria" and fungus spores.

"Of the public springs, one lies just below a livery-stable, the drainage of which into it is manifested by a considerable admixture of chlorine; another receives a contribution of brine from a neighboring pickle factory; a third is situated on the southern side of the road to Sing Sing, exposed to surface-drainage from the road and from an adjacent house. As dysentery was said to have occurred among the families using this latter spring, I carried home some of the water for more careful examination. It contained (by the permanganate test) 4.5 grains per gallon of oxidizable organic matter, with a trace of chlorine; and after condensation yielded a slight flocculent deposit, consisting largely of decayed vegetable matter. There were also present numerous diatoms, confervæ, free-swimming zoospores, mycelium-threads and myriad spores of two species of fungi; bacterium termo in great abundance. Most suspicious of household waste was the appearance in one field of the microscope of an indigo grain and an epithelial scale. Indeed, as the spring is arranged — with a sunken barrel, below the level of the road-bed and the surrounding earth — it can hardly escape occasional pollution.

"To account for the unusual outbreak of malarial fevers this autumn, as contrasted with the comparative immunity of former years, it is to be considered that during a prolonged drought the soil upon the higher portions of the slope may have accumulated a freight of organic matter from leaching cess-pools and various other sources, which by the subsequent excessive rain-fall was rapidly borne down upon the lower land of the infected district, adding its burden to the already over-taxed capacity of the latter region.

"The public defects above noted need few and simple remedies. The restoration and preservation of the natural drainage courses, involving the construction of adequate culverts where the railway obstructs them, would in most places suffice to unload the soil toward the river; and clearage of the channel of the latter in its southern part would, by lowering its level and facilitating its flow, relieve the lowest land along the margin. How these ends may best be attained is an engineering question, to be left for consultation between your Board and the local authorities.

"The domiciliary conditions, which I regard as of greater importance, open a more difficult problem, embracing the relations between landlord and tenant, and the question of the proper disposal of refuse. Several of the houses which I examined, I should not hesitate, in their present condition, to condemn as unfit for human habitation — some through inherent defects of site and construction, others through lack of sub-soil drainage, which would entail an expense disproportionate to the rental obtained for them. As population increases the multiplication of cess-pools and privy-pits in such a soil must add to the dangers of soil-saturation, and ultimately induce filth-diseases as well as those of paludal origin. Already some of the more intelligent citizens have adopted the dry-earth or ash system with shallow and often-emptied pits, and the cremation of kitchen refuse; but here, as elsewhere throughout the country where water carriage of sewerage is impracticable, a general reform in the methods of conservancy is of essential moment for public health.

Respectfully submitted,
ALFRED L. CARROLL, M. D.
Inspector."

November 12, 1882.

[H.]

REPORT ON REPRESSING AND PREVENTING CONTAGIOUS DISEASES.

This duty has proved to be publicly acceptable as well as important throughout the State. The general statute for the preservation of the public health has given to all local sanitary authorities ample power and discretion to adopt the requisite means for protection against the sources of known danger and for providing for the sick; and experience thus far indicates, that the households and communities in which this class of sanitary measures have to be adopted are usually willing to assist and co-operate with health officers. Not only as regards the general cleansing, ventilation and drying that may be required in and about the house where any of the spreading diseases are found, but as respects thorough disinfection of materials and premises, and most important of all, the isolation and special sanitary care of the sick, have the families and health officers acted with greater effectiveness and unanimity than had been predicted. To secure precautionary attention to small-pox is easy, but it was, at first, by no means certain that such sanitary precaution would be successfully adopted in the care of diphtheria, scarlet fever and the fevers that are reputed as infectious.

The once common and yet lingering disbelief that diphtheria and scarlatina are infectious, and properly subject to isolation and disinfection, and the still more common belief that by some fortunate kind of oxidization and dilution of the infections matter or *contagium* of any of these maladies their operation as *virus* to propagate the same disease may be overcome and prevented, had to be, and may still for a time have to be, met by health officers; yet, in the vitally important and responsible work of these officers and the local health boards, the dilution of contagious matter is not to be regarded as the destruction of or the antidote for it, the safe course being to regard the chief if not all of the contagions and infections as germinal and self-propagating, by means of particular attributes that can be controlled or destroyed just in proportion to the exact knowledge we have of these germinal attributes and the accessory factors of causation, as regards the diseases respectively. The State Board of Health has steadfastly promulgated this view of the reasons and the duties relating to the various contagious maladies, and therefore has placed in every school district in the State as well as in the hands of all local health officers, the Sanitary Papers, 13, 14, 15, 16, 38 and 41, relating to this subject.

Since the local boards of health became sufficiently organized to undertake to give full effect to the statutory provisions concerning the preparation of temporary hospital refuges for the sick with acute contagious disease, this Board has encouraged and aided such resort to hospital care as well for the recovery of the sick themselves as for repressing the spread of disease. The preparation of certain most available plans and estimates for contagious disease refuges and temporary hospitals was ordered, as described in the diagrams here annexed.

The great interest which has been awakened in recent demonstrations and evidences — more or less complete — as to the particular nature of contagions or the infective germinal agents in the maladies hitherto known as infectious, and, still more, concerning the most destructive of common pulmonary diseases, is certainly resulting in a most beneficent kind of care-taking of the sick and the households which suffer from any of these diseases. And, fortunately, the sanitary and medical facts and duties concerning these matters are so set forth by the medical authorities who have any proper comprehension of them, that they induce the most devoted attention to the welfare of all sufferers and exposed persons, instead of that kind of alarm and anxiety which opposition to, and ignorance of, these truths and the sanitary duties are prone to cause. Observation already proves that the tranquillity and safety of households, schools and neighborhoods. as well as the excellence of care of the sick and the probabilities of least fatality are alike enhanced by the best knowledge and uses of these facts relating to the nature and laws of infection. Truth is a tranquillizer, and is ever saving.

The domestic separation and quarantine of the sick.— The current publications issued by this Board, numbered 13, 14, 15, 38 and 41, relate exclusively to the sanitary measures for preventing the spread and fatality of infectious diseases. The precise methods and principles of procedure to be observed by local sanitary authorities and medical attendants in relation to cases of these maladies, as now advised by the State Board of Health, are set forth in papers known as 27, and 27 *a* and *b*, and found in the Second Annual Report, pages 406 to 414. To these principles and methods we would adhere. They are readily adopted, effectual and economical. In regard to them and to all the procedures for removing and preventing the causes of infection, we "must be careful to do the sick no harm," but more than this, must do every thing to make the place where they are "a house of recovery."

To what extent local sanitary authorities and physicians will unite in the requisite efforts to secure the construction and out-fitting of contagious disease-refuges may not now be foreseen. The timely and well sustained movement that now promises model structures and organization for contagious disease-refuge and hospital on the East river side, at Sixteenth street in the city of New York, and the plans on a basis of hospital charity for a like purpose in Albany and Rochester, will soon unfold such results of utility and experience generally as should guide each of the twenty-four cities, and a hundred or more of the large villages in adopting adequate means for complete control of the contagious diseases. Certainly the enlightened efforts of medical practitioners in their advice to, and coöperation with, local boards of health, and in their professional directions for the domestic separation and special care of the sick, are the most important of all means for repressing the domestic pestilences. The significant fact is now chronicled that in several towns in which are populous villages, the town board of health has caused a refuge and hospital for contagious diseases to be established upon grounds beyond the village limits, while in one instance, namely, at Catskill, the village board of health has obtained a ten-acre field for its refuge and hospital, safely beyond the village streets. The very desirable plan of obtaining extensive areas of ground, usually from five to twelve acres, on long leasehold or by purchase, and of giving considerable permanency to the structures of the refuge, has found favor in various places in the State, and it will be desirable to add to this first series one approved plan for a more permanent pavilion refuge and hospital.* In all of these plans the administrative and accessory requirements of the refuge are, for obvious reasons, provided in separate structures. This is best and most economical wherever the building site is sufficiently extensive, yet if a restricted space of ground, or other reasons, should make it necessary to bring all such accessory parts under the same roof with the refuge hospital, a very convenient mode of doing so will be found by converting the parts **3** and **F**, into administrative quarters. See page 266.

---

*The board of health of the town of Niagara has, with the coöperation of two village boards, and with the approval of the town auditing board, erected a refuge hospital, with four apartments, on elevated grounds beyond the villages. The town of Queensbury has done likewise, for the benefit of its principal village, and has made permanent the hastily constructed little pavilions that were used in the suppression of a small-pox epidemic in 1881.

[No. 27.][a]

CONTAGIOUS DISEASE REFUGES:—TEMPORARY HOSPITALS

FOR

SMALL-POX AND OTHER PESTILENT CONTAGIONS.

Prepared and Distributed under Instructions from the State Board of Health,

By the Secretary.

The illustrations upon the next two facing pages present examples of the most suitable and readily erected Hospitals and Refuges for contagious diseases that need to be quarantined.

Plate I shows Refuge-Huts, and accessories, built of wood.

Plate II shows Refuge Tent-Hospitals.

No. **1, & A,** in Plate I, show the plan of a temporary hut which can be erected and made ready for two patients in a day or night. Length, 22 feet, width, 10 feet, and height (average), 12 feet. Total cubic feet of air-space = 2,640.

This little hut or pavilion (1 & A) has four or five windows, and may be warmed by a stove. It is designed to meet the first urgent necessity for quarantining one or two patients until a larger structure (2 & B, C, D) can be erected for greater numbers, when this may be reserved for convalescents. If only two or three patients are to be so placed in Hospital this hut is sufficient. [The cost of it, at the lowest, is about $65.]

No. **2 & B, C & D,** show plan of a larger structure in which from six to nine patients, with the same kind of contagious diseases can be well accommodated. Its accessory structures may be erected after the shelter for the sick is completed. This pavilion is 22 feet by 30 feet, = 660 square feet of floor-area; with a mean height of 14 feet. Total cubic space = 9,240 feet. The length may be increased at pleasure. Every 10 feet of such increase will add 3,080 cubic feet of air-space, and enough for two or three additional patients. There should be no partitions (unless deemed necessary for locked separation of sexes). The floor-screens,—C, D & G,—are the only means of separation ordinarily needed.

No. 3 (& F) is the plan of an accessory building, with shed-roof and five or six compartments. Its front line is 20 feet back from the sick ward.

No. **4** shows all that is needed for a disinfecting-room and a dead-house. (Needed in an epidemic.)

No. 5 (& E & E^1) shows plan of privy arranged for sanitary security, at least cost, as a disinfecting and dry-earth closet. Its tubs are the halves of a kerosene barrel.

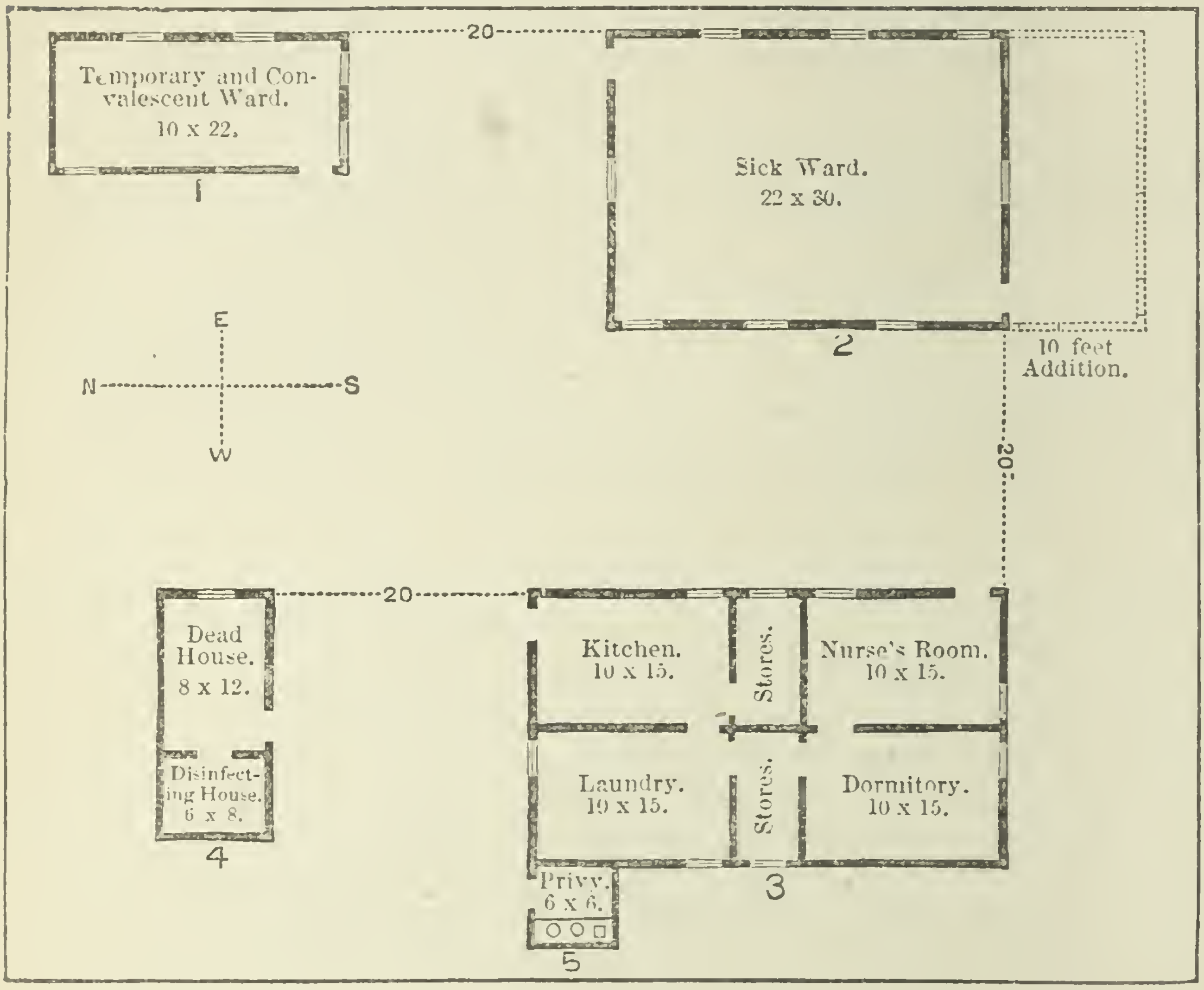
Fig. **A** shows south-end view of No. 1, the temporary and convalescent ward.

B presents a view of either end of No. **2** and **C,** with the end windows and one of the doors.

---

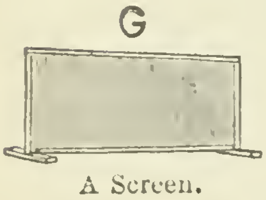
* This and the three following pages constitute [No. 27][a] of the Permanent Series of Sanitary Papers. [See No. 27, page 318.]

CONTAGIOUS DISEASE REFUGE AND HOSPITAL.

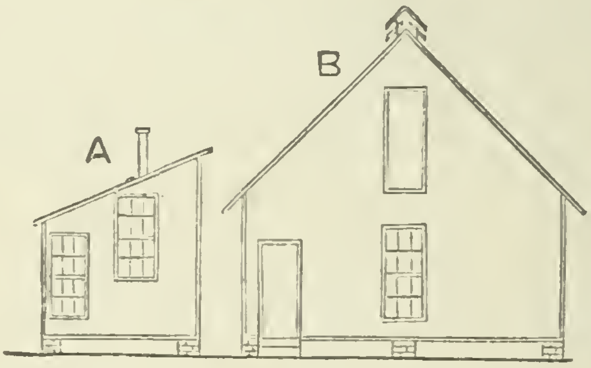


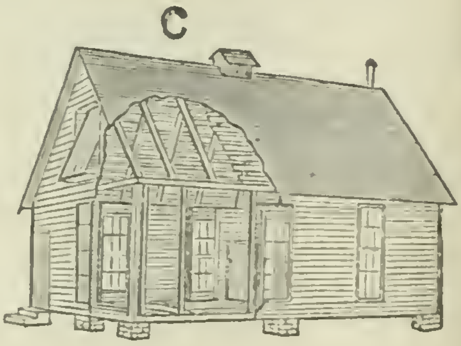
Inclosed Area, isolated, as here shown, 75 x 92 feet.

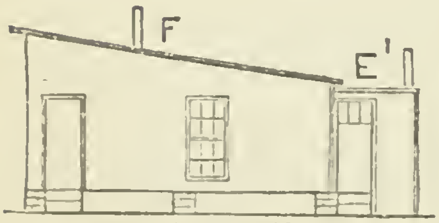
[This quarantine-ground to be extended 50 to 100 feet on each side.]



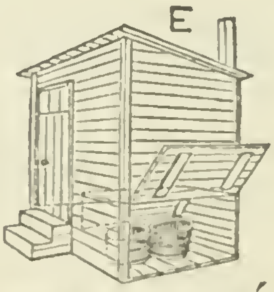
A Screen.



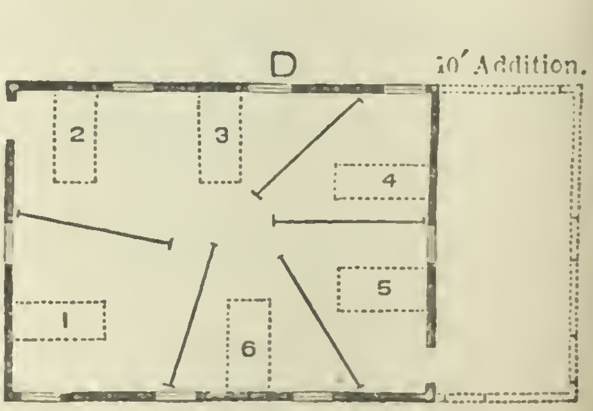




North End No. 3.

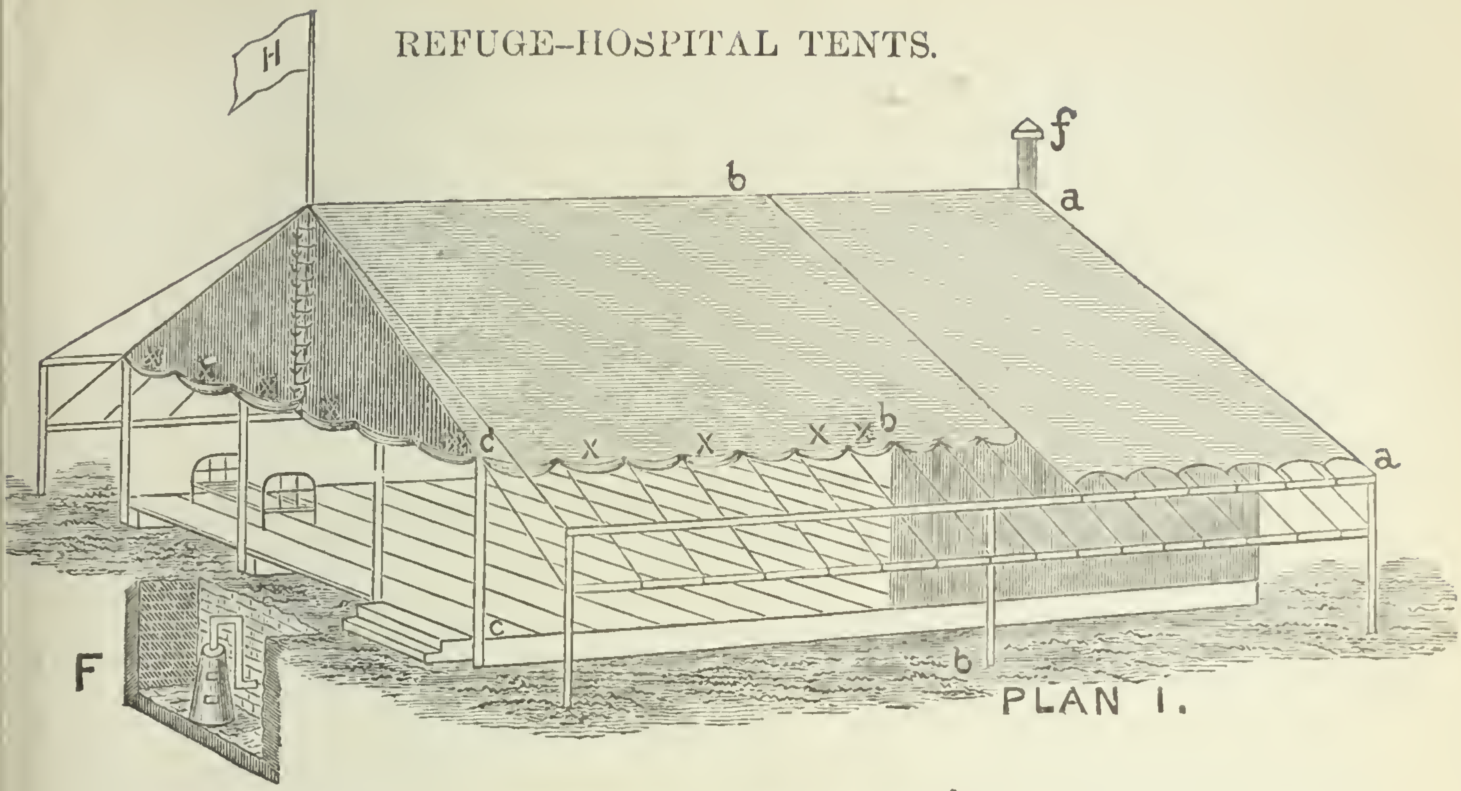


Privy Enlarged [E′]

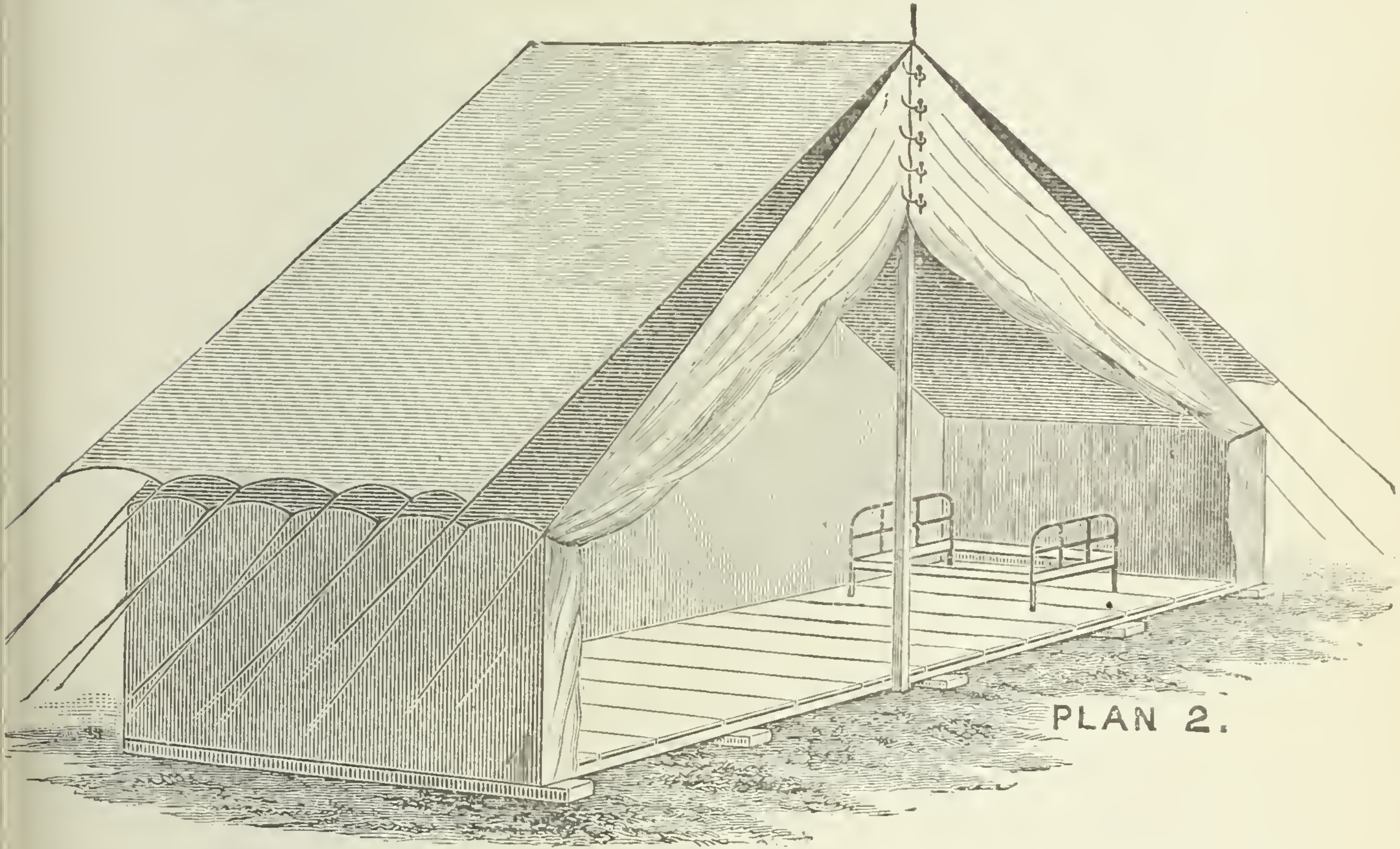


To accompany Third Report of State Board of Health of N. Y.

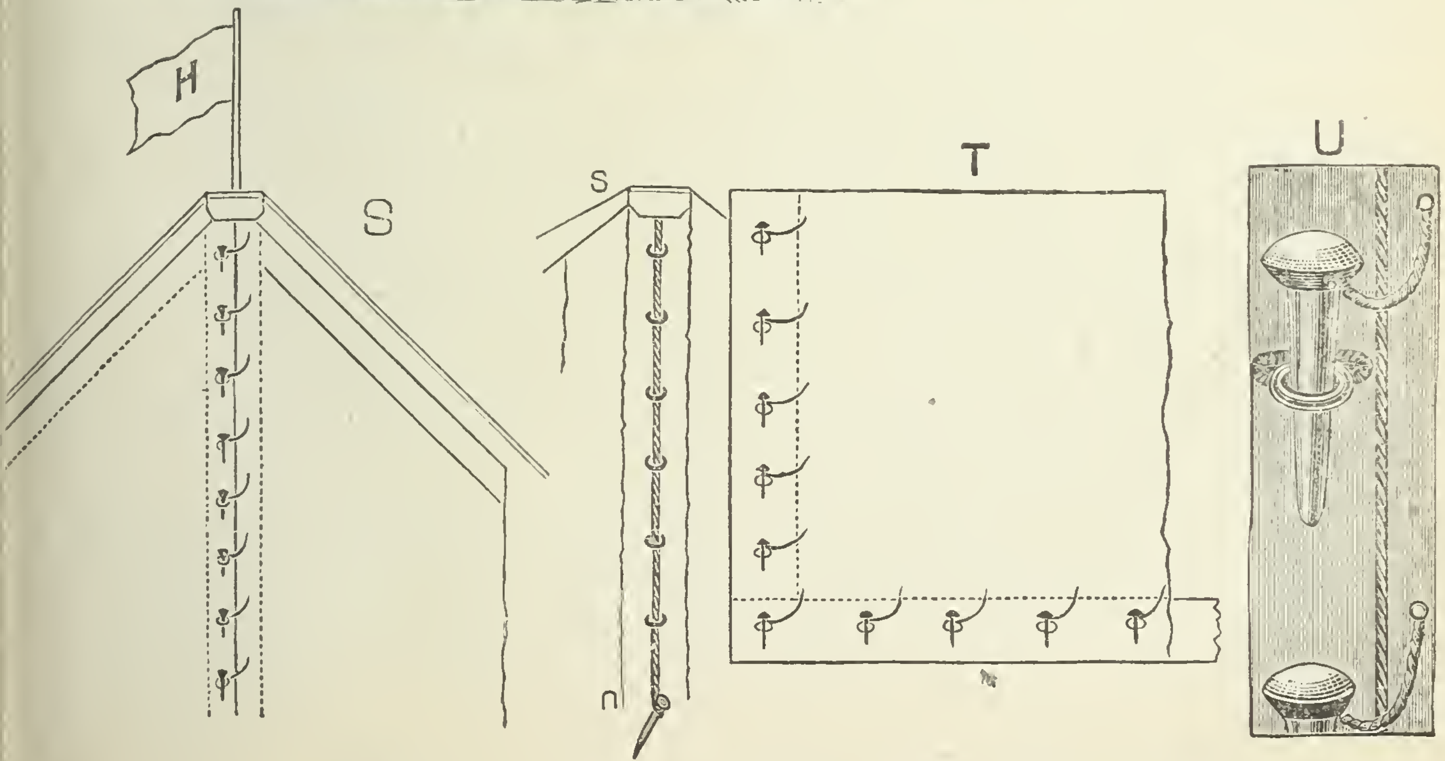
REFUGE-HOSPITAL TENTS.



PLAN 1.



PLAN 2.



Modes of Closing and Fastening Canvas.

nnual Report State Board of Health of New York.]

C gives an interior (broken) and an exterior perspective view of pavilion **2 & B.** The positions of its ridge-ventilator, and its gable window swung on an axis,* are seen.

D shows the ready subdivision of floor into bed-spaces that may be separated at pleasure by the movable screens. [G.]

E & E′ & 5 are views of the privy, etc.

F is the north end-view of kitchen, laundry and privy.

G shows face and feet of a screen; length 10 or 11 feet; height 5 or 6 feet. Two flat-feet of plank-strips, with firmly fastened end standards and a cross-bar, with a face of stout muslin stretched and fastened by moulding-cleats and headed tacks*, are all that are required for such screens. The muslin may at times be used as the means of disinfecting the ward-atmosphere by the alkaline Permanganate or spirituous Thymol solutions, which may be painted upon the screens as required for evaporation, continually, or at intervals. †

REFUGE-HOSPITAL TENTS--PLATE II.

PLAN No. 1 shows a well-floored and warmed Tent-Hospital, with an extended *Fly*. The whole, or any section, may be open at the sides and ends, and any section may be completely or partly closed, at the option of the physician. As here seen the floor and sides and south-west end are open (b to c), the rolled canvas is looped up at x x x, to be let down in a moment, and fastened, to protect any section or all sides.

As here seen the tent-floor is supposed to be 20 by 40 feet, = 800 square feet area. The mean height is 12 feet. Total cubic feet of space within the Tent, = 9,600.

F shows a jacketed stove; and **F f** shows the course of the hot-air flue, which is a large sheet-iron cylinder within which the smoke-pipe from **F** extends to chimney-pipe f.

PLAN No. 2 is an ordinary Hospital-Tent, with the Fly spread as a double roof; but that, or another Fly, may be extended in front (to south-east) and the extent of flooring may be doubled and the hospital capacity thus increased. The floor-area, as here seen, is supposed to be 14 by 16 feet; and when extended, — for a Fly-canopy, — it would measure 16 by 28 feet. The latter is sufficient for four or five patients and an attendant; the former for one or two. Where the materials are ready, and in good military order, this kind of Tent-Hospital can be erected and prepared in an hour from the time the grounds and floor are prepared.

S, s, & U, show the method of *fastening* the overlaying margins of canvas at the gables and sides of tents. **S & U** show the pin, ring and button-hole methods and **s** shows how to use a heavy cord with its "needle" dropped through a series of rings or staples to become a fastener.

T shows how to make, and to close, a ventilating-window in an end or side of the tent, also how to attach and fasten strips of canvas.

To erect the Tent-Hospital — Employ a man whose army experience or other knowledge and tact will serve the purpose. Second-hand canvas will answer for a Small-Pox Refuge, as the Tent must be burned as soon as out of use.

To secure dryness — Select dry and moderately elevated ground, and, if not on a rock, dig a trench two feet in depth entirely around the Tent, — within two or three yards from it, — and give it a secure outfall.

---

* Windows for *ventilation* are quickly made in the same way as the bed screens, with unbleached muslin stretched upon frames. Half of the ward windows, or one-half of every or any window, may thus substitute muslin for glass.

† The builder's specifications, in details of materials and cost, are given in the Board's Circular, [27]*b*.

Special sanitary rules to be observed in the care of the sick with infectious disease.— The infective poison or contagium of each of the maladies that is subject to quarantine, or the restrictions of isolation, has certain peculiarities of its own, yet has others which are in common. The attendants upon the sick with such disorders, whether in the family or the contagious disease hospital, should conform their rules of sanitary duty so as to completely prevent the diffusion and operation of the infection. Most if not all of the contagious diseases may be spread from the sick to other persons by means of their excremental outflowings; some spread or are infectious in no other way, it is believed, as in the enteric ("typhoid") fever, malignant cholera and certain kinds of dysentery. Small-pox, scarlet fever and diphtheria may be spread in like manner, though the former two have their infective poison most concentrated in and readily diffused from the surface of the body, while diphtheria diffuses its infection most readily and copiously from the fauces and nostrils, and typhus and the relapsing fever spread their intensely active infection from the surface of the body, the breath and every thing that may retain and convey away the infected air which is close about the sick or the dead of either of these low fevers. The deadly contagion of malignant pustule (the *charbon* of cattle and sheep), and of glanders (of the horse) is, in each case, spread directly from the sick beast, by whatever means conveyed. There are other and rare kinds of deadly contagions and infective processes, all of which require that the sick be isolated; other kinds of contagion, for example, measles, rotheln and whooping-cough are endurable evils that may be measurably repressed by timely separation. There is one most destructive infection that, so far as known in our northern latitudes, is borne from its habitats at the south and from any place where planted, chiefly or wholly as infected air with the poisonous germs adhering to, or inclosed in porous substances or closed vessels, and transported from the infected atmosphere of the places in which the malady prevails; such is the infection of yellow fever.

The rules to be observed by attendants upon any of the contagious diseases which infect the air of the sick-room require:

(1) That the attendant shall not mingle with other people, except under medical regulations relating to the necessary personal preparation for such liberty.

(2) That the physicians shall strictly conform to sanitary regulations and practices while exposed to, and liable to be carriers of, contagion.

(3) That all who in any manner visit or expose themselves to the infected sick-room, or handle infected things, shall strictly conform to sanitary regulations to prevent harm to themselves and others; and that all infected things and premises shall be promptly and thoroughly disinfected, and that none of these sources of danger shall be at any time or in any manner left unguarded.

The cardinal principle which must have sway in the sanitary care of the sick and the wards or apartments they occupy, is comprised in such medical and nursing service, as best protects and fortifies the patients in their conflict with the disease, and which constantly enforces the rules of thorough cleansing and disinfection of clothing, utensils, and of all that emanates from the sick. These sanitary regulations, and the principle on which they depend, are concisely stated in

Sanitary Papers 13, 14, 15, 16 and 27^a, as given in other sections of this appendix.

Precautions must be observed by all persons visiting contagious disease-refuges and the sick from contagion; and as the large experience in England, where there are now nearly 400 hospitals for contagious diseases, has led to the adoption of very suitable sanitary regulations for this purpose, the following brief abstract of them is here quoted. They are essentially the same as were for years in force at the quarantine hospitals of the port of New York. This guarded kind of necessary intercourse with the sick-room and its inmates rarely has done harm:

I. The visiting of patients in this hospital (refuge) is limited to nearest relatives and intimate friends of patients *dangerously ill.*

II. Notice will be sent to the nearest known relatives of patients dangerously ill. Such a notice will be accompanied by a copy of the regulations under which visits can be made.

III. Parents will be allowed to see their children (under necessary rules).

IV. Visitors are warned of risk in entering the hospital.

V. Visitors are advised not to enter the hospital when in a weak state of health, or in an exhausted condition; to partake of food before entering the hospital; to avoid touching the patient or exposing themselves to the breath or to the emanations from the skin; to sit or stand at a little distance from the patient, and not to handle the clothing, etc.

Conveyance of the sick to the refuge hospital.— The ambulance may be any easily-sprung covered vehicle, which will not be used for conveying others than the sick, and which can be thoroughly disinfected. Public coaches and cabs must not be resorted to for carrying the sick. During an epidemic of the infectious disease treated in such hospitals a suitable vehicle and mode of transportation for patients must be adopted, and should be such as will insure perfect care and tranquillity of the sick *in transitu.* The member of the family or the nurse who accompanies the patient should be fully instructed in duty.

SANITARY PROCEDURES IN PRACTICE.

Every case of small-pox, diphtheria, scarlatina, typhus or typhoid fever or other infectious malady, being, by sanitary regulations, in every town, city and village, *reported to the local board of health as soon as known,* the action taken by the physician, the family and the health officer should be:

(1) To separate the patient or patients from all persons liable to take the disease.

(2) To provide such perfect sanitary care for the sick, and such prompt and complete disinfection for the apartments, clothing and other things that require disinfection, that disease shall not spread from them.

Duty of physician, householder and family. — Small-pox, diphtheria, scarlatina, typhus or typhoid fever being discovered and certified to exist in any house, the physician in attendance and the householder, or family where the disease appears, is required to give notice to the health officer, or if there is no health officer, then to the nearest member of the board of health, stating the name, age and circumstances of the sick person or persons. The medical attendant should at once separate the sick from all others than those who have the care of the cases, and should also carefully instruct the family concerning duties to themselves and to the sick.

Duty of health officer and board of health.— Be prepared to give specific directions, both verbally and by the printed card, showing precisely what to do, what to avoid, especially in regard to the apartments and persons where the sick are, the care and disinfection of all things that can communicate the disease, and also in regard to the rules concerning improper intercourse with and movements of the sick and whatever can convey disease; also the sanitary purification required at the termination of the case. The official card for this purpose should be placed in the hands of those in charge. The medical attendant is responsible for the duty of faithfully enforcing such rules and regulations as long as the sick and the family are under his professional care.

The sanitary authorities should direct the methods and extent of disinfection, but it is usually best to do this by the help of medical attendants, in no case, however, permitting these duties to be omitted. The official notice to the households and their medical attendants should state these rules and duties plainly and briefly. The following is a suitable form for such notice to the family or their physician:

A—— B—— being sick with [small-pox] must be kept entirely separate from all persons except the appointed attendants, and no others can be allowed to remain upon the same floor of the house, unless they have had [small-pox,] or [been successfully vaccinated] within a few years. The directions given in Nos. 15, 16 and 41 of the State Board of Health papers should be faithfully followed.

The attendants, as well as the sick themselves, must be kept entirely away from all persons who are not already protected against the contagion. The attending physician and the undersigned will give any information desired in each case, and the official release from sanitary restrictions will be given in writing as soon as it safely can be.

By order of the Board of Health,

(Signed) ————————

Health Officer of ————.

NOTE.—Whenever a transfer to the refuge-hospital is agreed upon, the health officer's or attending physician's orders for the disinfection of premises and materials should be indorsed on this memorandum.

Quarantine and other sanitary orders against contagious disease.— Though it is presumed that the health officer and the board of health will, with rare exceptions, have the confidence and concurrence of the people, so that sanitary orders and instructions will be promptly complied with, the law provides suitable means for enforcing any necessary order of the local board of health.

An order for the isolation or quarantine of any source of dangerous contagion is absolute in its nature, and must be promptly obeyed; and under sections three and four of the Public Health Act, as amended in 1867, 1881 and 1882, it is provided that "Every person who shall willfully violate or refuse to obey any order or regulation, * * * so made and served shall be deemed guilty of a misdemeanor," and by issuing its warrants to the constable, the Board may "apprehend and remove such person as cannot otherwise be subjected to the orders and regulations by them adopted." In the execution of such orders the officers are required "forthwith to execute them, as if the same had been duly issued out of any court of record."

Small-pox, diphtheria, typhus, typhoid and scarlet fevers and cholera may occur under circumstances that require such prompt action. The State Board has issued special sanitary papers, Nos. 13, 14, 15, 16, 38 and 41, to aid health officers and families in their duty concerning these diseases.

Records of deaths and prevalent diseases.— The laws require these records to be returned to each local board, as well as the State Board of Health, by the health officer. Card No. 30 has been prepared for this purpose, and is supplied by the State Board. Cards 31 and 32 are for use by the medical attendants upon small-pox and diphtheria, and are supplied by this Board to physicians through the local board.

Temporary quarantine :—Refuge and Hospital. — There are four ways of quickly providing a suitable refuge and hospital for contagious disease :

(1) At home, upon the upper floor, or in any completely secluded part of the house,— cleared of all occupants, except the sick and attendants.

(2) A separate little building suitable for a hospital ward ready for use.

(3) A board hut or a pavilion, hastily constructed for the purpose ; or

(4) A hospital tent and fly canopy; and these are the safest kind of contagious disease refuges, during the warm season.

The *first* is the common expedient. It is best that the entire floor, or that a separate quarter or end of the dwelling, be set apart for the domestic quarantine of the sick.

The *second* is occasionally the most available and suitable method. Such a separate building should be in a healthful spot, and thoroughly ventilated.

The *third* is frequently the best method of quickly and effectually providing for any increasing number of patients. The preceding plan and specifications for a contagious disease-refuge and hut is designed to show what may be constructed in a single day to meet an emergency, such as frequently occurs in villages, alms-houses and asylums. The hospital tent is the best kind of refuge in the warm season, if the tent-canvas and materials are at hand. The preceding plans and directions for the tent-hospital will be readily understood.*

These methods need no further explanation in this chapter ; yet as regards any method of isolation, removal, and the quarantining of contagious diseases, *we must be careful to do the sick no harm* while the people are being incited to the duty of removing and preventing the causes of disease.

The objects of this chapter will be attained if health officers and boards of health find their duties made clear and their work facilitated by it.

---

*See pages 268-271 *ante ;* also Sanitary papers 27 and 27 a and b.

[I.]

MEMORANDUM UPON OBLIGATORY VACCINATION AND THE MAINTENANCE OF PERFECT VACCINE VIRUS AND KINE-POCK.

The amazing discovery of the protective property of kine-pock so far preceded any scientific reasons or account that could be given of it, that the civilized world has received this boon as an unaccountable benefit rather than as one of the most recondite evolutions of a truth, the science and application of which necessarily require the most exact observations and proving. Though Dr. JENNER, the discoverer, seems to have comprehended the necessity for the scientific basis of vaccination as it became a branch of medical art which he hoped would redeem mankind from the doom of the horrid and contagious pest which was destroying in a dreadful way nearly a tenth of the race, he lived to witness and protest against the ignorant and reckless abuses of the practice of vaccination, which have, ever since that time, greatly discounted its utility, and invited the harsh criticism of persons who misjudge the charlatanry and stupid malpractice which result in spurious and cruelly deceptive consequences, to be the legitimate outcome of the kine-pock practice.

While JENNER and the chief physicians and statesmen, seventy or eighty years ago, were rejoicing to see numerous governments adopt, provide for, and even enforce the duty of vaccination, they learned, a few years later, how execrably negligent and unworthy were many of the physicians who publicly and privately assisted in this new medical duty. The public as well as private practice of vaccination has ever tended to become a merely formal and empirical matter, because it is so generally viewed as a sort of mysterious incantation, of which the point smeared with lymph-virus, or bearing a particle from the dried sore of a pock, acts as the "charm." Whereas, it is true that instead of mystery and the "charm," the procedure to vaccinate should be treated as the nicest of medical arts and physiological tests, in which a natural susceptibility to the loathsome contagion of small-pox is to be overcome, and in which the perfection of such conquest over the liability to deadly contagion actually depends on the definite qualities of the lymph-virus as respects the precise development or culture and taking of it, and as regards the minutely important conditions of the keeping and using of it.

The facts relating to all these matters were ascertained and very clearly stated by Dr. JENNER, in his day, but for want of a demonstrated and scientific basis of the physiological and ætiological knowledge by which the art and practice of these endless generations of the cow-pock virus would naturally be determined with rigorous precision, the faulty and untrustworthy kinds of vaccination almost equal in amount the correct and completely protective vaccinations.

Experience has long and extensively taught that the average vaccinations in ordinary medical practice will not abide even the old

Jennerian tests of worthiness, and that the public or gratuitous vaccinations rarely will rank higher than the vaccinations in private practice. To remove and wholly prevent such perilous faults in the practice of vaccination, there must be timely intervention not only by public health instructions and methods, with some aids and incentives to secure the adoption of correct practice and adequate means, but, also, there must be a minutely careful and physically comprehensive intervention of scientific research to determine the intimate nature of this wonderful inoculation process. The perfect rules and examples of JENNER and other worthy instructors have not been well followed. A rational insight and a comprehensive generalized principle or law seems necessary, to command universal deference to the rules for securing perfect results in vaccination.

Investigations in progress.— Though the fact seems well established that by incessant watchfulness, skill, and continuous reproduction or generations, it is possible to keep up the perfect protective attributes of the kine-pock in its humanized form, there is no doubt that the tendency to degeneracy, or a decrease of efficiency and energy, is to be confessed. The early vaccinators certainly witnessed wonderful results of tested protection against the contagion of small-pox. Thousands of vaccinated persons were inoculated with the contagious matter of small-pox, with rare instances of any receptivity of it. During the first thirty years of the present century there were frequent renewals of the kine-pock from the herds. There also followed a great variety of experiments to ascertain the actual origin of the kine-pock and to discover what natural relations exist between that disease, the variolous disease of the horse (*variola equina*), the variolous malady·in sheep (*variola ovina,*) and the small-pox in man. Each of these diseases has been proved to have such alliances with the three others that, so far as human small-pox is concerned, each of the three forms of variola in the domestic animals here mentioned will, when made to operate by inoculation in the human system, protect against small-pox. Further tests go to prove that each of these four kinds of disease-virus confers entire protection against each and all of the other three diseases.

The question of actual identity of these four maladies, as we witness them in four of the families of the mammalia, is of less importance than the fact that whichever is communicated to any individual of these several groups of beings, it tends immediately, by its operation as a morbid infection, to remove the *receptivity*, before existing, for each one of the other viruses. Though this demonstration is most complete as regards man and the bovine species, and as between the horse and that species, and the horse and man, the entire triple series of interchangeability, or, at least, of communicability and a protective result, may now be regarded as being completely demonstrated.

The pocky maladies in the horse and the bovine species are not all variolous ; and it is only in the heifer or bovine animal that the vesicle is found to be identical with that which in turn results from its inoculation in man. While Mr. Ceeley and Mr. Badcock proved that from two to seven per cent. of the heifers they inoculated or attempted to infect with the contagious matter of small-pox, actually took the disease, and that with great care in subsequent culture and humanization of the vesicles, they became apparently identical with vaccine vesicles, the fact remains that the natural kine-pock, and the products of its continual artificial inoculations, constitute the defense of mankind against small-pox. Therefore the discovery and utilization of every perfect case of the natural kine-pock have become vital sanitary duties. The local government medical officers in England have for years searched and experimented in vain to secure a valid and efficient new stock of vaccine lymph directly from the cow, and, recently, their inquiries brought the horse, with the "greese" so called, under experimental use for the purpose of developing the true kine-pock in heifers. Failing in this, (from obvious causes,) that government is continuing its search after primary outbreaks in a herd of cows. The English still adhere, by preference, largely to humanized vaccine lymph.

Bovine virus, as cultivated continuously in heifers, for human vaccinations, now so extensively employed in the United States, is depending exclusively upon the line of supply that was started in a dairy herd at Beaugency, in the department of Loiret, France, in the spring and summer of 1866. Designed, at the time, to silence the agitation and fears relating to the alleged contamination of humanized virus, on the one hand, and, on the other, to overcome the objections to further employment of the enfeebled virus produced and cultivated from the degenerative process and practice of retrovaccination, or re-inoculations of humanized virus into the cow, the Beaugency bovine virus is now the chief stock of animal vaccine for the civilized world. It has come gradually into use in the State of New York since the spring of 1870.

To find and utilize an efficient and perfect new stock of kine-pock is so plain a sanitary duty that the State Board of Health has caused extensive inquiries and some investigations and tests to be made. The skillful aid of Prof. James Law, of the Cornell University, has been brought into this important service, and up to the present date three herds, in which the kine-pock has appeared spontaneously (or by some source of contagion yet undiscovered), have been put under observation. The inoculation tests upon heifers have not yet yielded satisfactory results, but the habits and pathological phenomena of the natural cow-pock are successfully studied, and ere long there will be successful inoculations, it is believed, when all the conditions favor.

A memorandum upon the essential rules for perfect vaccination, and concerning the vaccine virus.— Though it may possibly be found at some future time that Pasteur's discovery of a principle and method of reducing a contagious virus to a kind of sterilization that allows its protective operation, without harmful or contagious results, may lead to a benign use of inoculations for other diseases than small-pox, the present interests of mankind are best served by a faithful following of the essential rules for obtaining and applying the kine-pock, and for maintaining the purity and perfectness of this kind of protective virus in continuous generations of it, from child to child, or from heifer to heifer. JENNER and the early vaccinators frequently resorted to the primary source of the pock in dairy herds, yet they did not attempt, by continuous inoculations, to perpetuate a bovine source of such vaccine lymph. In the spring of 1816, when there was just anxiety for the quality and efficency of vaccine virus, and arm-to-arm vaccination was the trusted method, JENNER himself wrote to a friend that the virus he was using in his vaccinations, week by week, was derived "from a cow sixteen years ago," and he added, "If there were a real necessity for renovation I know not what we should do, for the precautions of farmers have driven the cow-pox from their herds." Fortunately the natural kine-pock still occasionally occurs, and affords new opportunities for the renovation of vaccinal matter, and still further, the art of inoculating heifers and maintaining a continued series of generations of the bovine virus has been acquired. The entire feasibility of perpetuating the perfect protective attributes of the primitive virus from the cow, whatever adversities or success may chance to attend the common practice of vaccinating from arm-to-arm, or with stored humanized vaccine matter, it has become equally as important to inspect and record the results of each vaccination with heifer virus, and also demand that the production of such animal virus shall be a perfect art, as it ever was and ever will be in the vaccinations with humanized virus, to select the perfect lymph at the proper hour of its maturity, and to watch its operation.

The bovine lymph-culture and selection is a delicate and responsible art, and it requires skill and conscientiousness to render any marketing of it at all trustworthy. The culture and arm-to-arm inoculations which perpetuate the humanized vaccine matter are more generally understood and are not open to mere trade indifference and faults. Yet each of the two methods of culture and procedure are liable to neglectful abuse and failure. The same kind of painstaking, and essentially the same principles and rules are necessary for success in the practice under either system of vaccination and of culture of the virus or lymph for use. Experience and medical opinions in this marvelous field are necessarily transitional, yet no expert vaccinator to-day can deny that the experience and lessons of Dr. JENNER himself have, upon the whole, proved the most distinctly correct and impressive of all instructions concerning thephenomena and signs of vaccination and concerning the rules for selecting true vaccinal virus. For this reason a concise summary of JENNER'S own recital of his experience should be kept as a *précis* in the conspectus of the family physician.

Whether physicians continue to depend chiefly upon bovine-cultured lymph, or at last resort again to humanized virus, there will continue to be the same necessity for all the conscientious discrimination and care that JENNER illustrated and taught in the selection of the lymph-virus and in vaccinating. Whatever revulsion and medical contentions may hereafter occur in regard to the absolute and comparative merits of the two modes of culture and procuring of vaccine virus, and whatever may be the new developments of true scientific knowledge of contagions and viruses, and especially of small-pox and vaccination — and such growth of science in this matter is now in progress — these observations and rules of JENNER will doubtless demonstrate such comprehensive principles as will before long establish the universal faith and most perfect method in the art of preventing small-pox by vaccination. The new statement of the essential physiological principle and the comprehensive result of vaccination or the inoculation which benignly supersedes the pestilent operation of a disease contagium, as now set forth by M. Pasteur, or as taught by Robert Kock and others, tend to exalt the common-place and generally indifferent performance of human vaccination to be, henceforth, one of the most exact and scientific medical arts, so that the routine duty and indifferent act of vaccinating the human arm has become to all enlightened physicians what it was believed to be by Dr. JENNER, the nicest of scientific work. Even for the saving inoculation of cattle and sheep, to neutralize and prevent one of their pestilent maladies, the people of Europe now command the services of scientific masters like Pasteur. Much more, for the welfare of the human family, should vaccination, as a public health service, be directed and practiced under scientific instructions and with all the accessory means for securing absolute perfection in this medical and sanitary duty.

The obligatory duty of vaccination.— The general statute for the preservation of the public health in this State provides that every local board of health may require and gratuitously offer vaccination in every community; and the special law for securing the vaccination of all school children authorizes the exclusion of all unvaccinated children from the public schools. The local authorities have ample power to make vaccination an *obligatory duty*. This is about all the significance that can practically attach to the term "compulsory vaccination," except that *fines* and *penalties* might be ordered under enactments of the Legislature. Under the existing laws in this State no fines or other punishment can be imposed on those who refuse to comply with the sanitary rules of vaccination. The disability that may be visited upon school children under the school vaccination law is the only constraint inflicted (except in the presence of small-pox), upon the families of the unvaccinated, under our laws. Yet many an employer of companies of work-people, during the past few years, in this State, has enforced, as an employer's right, the order to every employee to present evidence of vaccination as the condition for employment by him, on and after a date or hour mentioned. This excellent rule is as impressively obligatory and practical as it is compulsory. During the past two or three years we have witnessed the uniformly beneficial and kindly operation of this voluntarily adopted rule, in some instances extending to all workers in textile fabrics in great manufacturing villages, and in one case to nearly five thousand mill operatives of a single firm. The entire success and popularity of this rule of vaccination of the employees and families connected with the Krüpp's gun factories and iron works, now the largest population in the world under one employer, sufficiently corroborates the justice and utility of this coöperation of great employers with the public sanitary authorities in securing general vaccination.

Compulsory methods, and even the employment of the term "compulsory," for securing general vaccination, cannot be adopted under any of the existing laws of New York. *Obligatory* is the appropriate term by which to designate the highest authority which can be exercised to induce compliance with the duty of, and any official orders for, vaccination. Exclusion from the public schools, exclusion from favor by employers, quarantining after, and in consequence of, exposure to contagions, together with an official record of the refusal to be vaccinated, are, in New York, the substitutes for penalties for non-compliance with the sanitary rules for vaccination; it is thus that the *obligatory* is, in practice, the substitute for a *compulsory* system. Were the State and local sanitary authorities able to offer all the perfect vaccinal service and perfect virus which the people need, and were it expedient to substitute gratuitous public vaccination for the medical practice of it by family physicians, the pleas for compulsory vaccination laws would demand a better hearing than at present, and penalties which would make them *compulsory*, be tested.

The *obligatory* principle and its methods in securing general vaccination should be so applied that serious disabilities or the withdrawal of valued privileges would justly result from refusal or neglect to accept the proffered protection against small-pox. Such deprivation and loss should be an obviously just and self-procured consequence of neglect to be vaccinated, as it is publicly confessed to be in the cases where employers prescribe the duty as obligatory toward them and toward the associated companies of work-people. The State, the local boards of health and school boards successfully apply this principle of obligatory action in the adoption of methods which lead to the reasonable preference and acceptance of vaccination when any just alternative is presented; and all experience shows that in giving success to the general laws or the local orders for vaccination, these two circumstances must be provided for as essential in the methods adopted: *First.*— Information and instruction given in such manner as to enlist the intelligent interest of all concerned. *Second.*— The means for enabling every person to comply with the requirement to be vaccinated must be offered, even where it is exclusively an official or business ordering, as in the case of Krüpp, the gun-maker, or in the manufactories of textile fabrics, as we have seen, so that all persons shall be without excuse for failure to comply.

Precisely what the employer and the school board can so successfully do, the health laws of the State and the lawful regulations and orders of local boards of health may require and provide for; and here begins the *State system* of vaccination. A *system* that shall be adapted to secure universal and perfect results in vaccination requires that the public health authorities shall adopt the necessary measures both to advise and to offer, or instruct where to secure perfect vaccination for every person, and especially for every child before its first birth-day. That the quality and efficiency of vaccine virus shall be so certainly adequate at all times as to prevent delays and defects of vaccination. That by State and local authorities all necessary information, advice, regulations and methods shall be made known to every parent and householder, to secure timely vaccination, and that every one shall be without excuse for neglect or failure of the operation.

Forecasting the development of methods and of some amendments of laws for making vaccination not only universal, but in the highest degree protective throughout the State, studious attention has been given to each of the three propositions here stated, and they have together assumed a definite shaping into a practicable plan. The fact seems to be generally conceded, that aided by the medical profession and the registry clerks who record the births, the boards of health may, and should, duly notify all parents and custodians of infants that the vaccination of every child is required previous to a time mentioned, and, at the latest, before its first birth-day. The public registry of births must aid this duty of notification, and it may also help preserve the records of vaccination. It will be quite practicable to extend such notification and sanitary instructions in regard to vaccinating infants beyond the list of the voluntarily and medically returned records of births to all parents and custodians of those not so reported, simply employing the same means for such instructions as must be used in the periodical search or canvassing which shall henceforth discover the full number and records of births. In all essential particulars the vaccination laws and regulations of Scotland can be adopted in the State of New York. The details of such a plan are not difficult to arrange and order to be carried into operation, and they would constitute a system of obligatory duties not difficult or disagreeable to the people or to the health boards. Thus the first and the last of these three propositions for providing ways and means of general vaccination would be in proper ways connected with records of the births, month by month and year by year.

The second proposition is open to wide differences of opinion and to diverse details of administration. As vaccination has hitherto been dependent wholly upon the bare chance of some such measure or appearance of obvious success in the inoculation that would pass the common judgment as being the vaccinal sore, even the medical practitioners in this State may at first fail to acknowledge the necessity of special supervision or an established certainty of the production and adequate public supply of perfect vaccine lymph. For, as regards the validity and perfectness of *vaccine virus*, it is the common opinion (however fallacious and dangerous) that being a specific and marvelous thing in and of itself, it is ever the same and cannot be any thing else, or be changed or degenerated to some harmful thing perilous to use. And as regards the constancy and adequacy of the *supplies of perfect vaccine virus* on hand and subject to any necessary requisitions for it, few persons are aware how precarious and limited such pre-existing supplies are, and how dangerous and unworthy are the advertised and the long-stored stocks of vaccine matter.

The practical questions relating to *skilled supervision* on the one hand, and the perfect conservation and *safe purveying of the vaccinal lymph* without assuming any commercial relation to it, on the other hand, have to be settled in this State in some way most acceptable to physicians and the people. The very first necessity is to obtain entire immunity from the spurious and every kind of detrimental or harmful virus. And this may be brought about by the supervision over all the stocks and supplies of vaccinal matter offered for sale or use within the State. The sources and dates of the supplies, and the names of the producers and each of the persons in trade or otherwise transmitting the supply or samples, will need to be recorded by the persons selling virus; and over these regulations the boards of health, and, as a central supervisor, the State Board, may be justly in full authority. This service will not be very difficult as there is at present only one "bovine farm" in the State, and scarcely more than half a dozen producers in other States who now supply virus to New York. The *testing* of each stock of vaccinal matter — that is, each producer's stock — occasionally, is the second condition of protection against spurious and harmful virus; and as only animal or bovine virus is now sold in this State, such testing can readily be made with entire certainty and at small cost, under provisions which the State Board of Health can cause to be made upon heifers.

Thus far may supervision and testing be provided for under existing sanitary laws. The only other point to be secured under existing laws relates to efficiency and certainty of perfect supplies of vaccine lymph to meet all emergencies. At present we discern no surer or better way than to encourage the best of the producers of bovine virus to have their resources under such command as to be enabled to respond to all reasonable requisitions for virus. The supplies required for 5,000 vaccinations can be commanded in an hour at present in this State, and adequate supplies for 20,000 might be commanded at from seven to ten days' notice. The system of supervision and testing will necessarily be principally at the expense of the State Board of Health, but it need never be a costly means of protection.

To these means for maintaining the validity and efficiency of vaccinal supplies, as well as of the general application of vaccination in the State, there is to be added, of course, a ceaseless effort to maintain such constant study of results of vaccination among the people, and such search for and culture of *primary kine*-pock, as will, if possible, enable the medical profession and boards of health to be sure that the greatest perfection and efficiency of the inoculated vaccine pock is secured.

To illustrate the leading points which are submitted in these statements, and to awaken a deeper interest in the duties here described, the following notes are added, upon

(1) The most essential conclusions concerning vaccinations, viewed as a sanitary duty.

(2) The investigations now in progress for ascertaining the natural laws and the existing conditions under which the cow-pock is communicated in herds, and to secure the best primary supplies of vaccine virus.

CONCLUSIONS.

That the preference for animal or "bovine" virus in vaccinating has become so general that sanitary authorities should keep themselves correctly informed concerning the producers who can supply the perfect and most trustworthy stocks of such lymph on slips or quills.

That whoever offers vaccine virus for sale should expect that the public health authorities may subject it to tests by inoculation, and should also keep such records of the purchase, reception and sale of the virus that in case of spurious results the responsibility of the source of supply may be immediately indicated.

That in devising the ways and means for general vaccination in any community all families and school boards should be enlisted and thoroughly informed by the physicians and health authorities.

That whoever offers or uses vaccine virus, "bovine" or "humanized," should be certain that it is derived and furnished from most trustworthy sources ; and whoever vaccinates a person should carefully examine the results of the operation on the seventh or eighth day.

That in communities where it is preferred to use humanized vaccine virus, it is expedient for physicians and health officers to establish a weekly vaccinating hour and day, so that the lymph freshly taken from an infant's arm shall be used.

Vaccination is so especially a medical duty that no official system should supersede the services of the family physician. The official methods, whatever they are, must be adopted to secure the action and cordial coöperation of the private practitioners and health officers.

Obligatory vaccination does not become offensive to the people if the rules and practice of it are such as secure perfect results. The ways and means and the official instructions for such vaccination must so prepare the way that the popular compliance will be prompt and universal.

That protection against the contagion of small-pox begins at the time the areola is formed around the vesicle, and consequently that whoever has been exposed to small-pox should be vaccinated as soon as possible and certainly within four days after such exposure, as with four days less time for incubation of vaccine virus than is usual for that of the small-pox contagion, the vaccination or re-vaccination *may* protect.

That were every person re-vaccinated until the susceptibility to small-pox contagion is exhausted, individuals and entire communities would be completely protected. Such is the protection which physicians, nurses and armies enjoy. They are *vaccinized.* Jenner and the best vaccinators ever taught this duty.

The gradual return of receptivity to small-pox contagion after puberty, or after certain fevers, or a residence in a tropical climate is good reason for re-vaccination of such person. Such physiological facts do not diminish the practical value of vaccination. *The receptivity is to be kept exhausted.*

That long experience finally demonstrates the fact that there is vast practical difference in the values of the *thoroughly efficient* and the *feeble* or *partial* operation of vaccination, and that the latter should be avoided. The science and art of vaccination require the former, in all cases ; the latter is a result of unworthy virus, unskillful insertion and use of virus, or badly adapted physical conditions, or of all or several of these faults.

Finally. — That whenever there shall be organized such a system of notification and advice for the vaccination of infants and school children, as a public health duty, as now proposed, under the State Board of Health, every family and all physicians will be kept informed with regard to the physical conditions for best success, and the means for obtaining efficient and benign vaccinal virus. Such a system is designed to secure *perfect vaccination* for every child, whether by the family physician or by the gratuitous offer of the public health officers. And that under such regulations, instructional and obligatory, all the good results which the so called *compulsory* vaccination laws could promise, are in effect secured, and that before compulsory fines and other penalties are resorted to, even in the cities, the full effects of sanitary advice and instruction, and of house-to-house vaccination by the local health authorities should be resorted to, and that in all these duties the local officers and the physicians must coöperate, and the best medical judgment should guide, the official service of public vaccination whenever such gratuitous service is offered.

[J.]

INSPECTION OF EMIGRANT TRAINS PASSING THROUGH THE STATE.

This Board, in its Second Annual Report (pp. 85–89 inclusive), called attention to an organized method of inspection which was put in operation upon each of the two through railway routes upon which emigrants are conveyed westward through the State. The plan proposed by the Board was cordially supported by the State Boards of Health of Michigan and Illinois, and by the National Board of Health. The work of inspection was continued in the State of New York, upon the trains moving westward, for some time after these other Boards had terminated their separate inspection services.

The chief purpose of this inspection was attained under the National law, enacted early in the summer of 1882, which aided in giving full effect to the attempt to secure international agreements, as described in our Second Annual Report, page 88.

Whether this Board, or those of States further westward, will be constrained to undertake any such medical inspection of trains of emigrant passengers at any time hereafter, will be shown by the experience of the National Board here referred to, and of the international undertaking for the sanitary inspection, vaccination and the re-inspection of emigrants at ports of arrival in the United States.

As shown in Health Officer Smith's report, there is good reason to believe that the comprehensive and efficient plan, which began under that officer's administration, and which was aided in its development, first by this Board, and later, with great zeal, by the National Board of Health and several of the western State Boards, has reached such conclusively satisfactory results, that it is not probable there will be a necessity for reviving the emigrant train inspection in the State of New York. Nevertheless, this Board may from time to time test the efficiency of the improved sanitation of emigrant passengers by means of the plan here referred to, by causing inspections to be made upon trains as they approach the western frontier of the State. Such inspections have been frequently undertaken, since the systematic work of this kind was terminated, and the observations so made have thus far warranted the conclusions just mentioned. Two inspectors, Drs. A. L. Perry and J. H. Trumbull, were placed on duty the 1st day of June, 1882, under instructions to examine all emigrant passengers found upon the emigrant trains moving westward in this State, to ascertain, as far as record-cards or marks on the arm would show, whether any remained unvaccinated; also to take notice of any sickness on the trains, and to arrange for the necessary care of the sick so found. This work was continued, without interruption or the omission of any train, until December 1.

The total number of emigrants examined was 91,420. These were distributed over the different routes as follows :

Upon the N. Y. C. and H. R. R. R., examined between the city of Syracuse or the village of Lyons and the western frontier of the State	53,724
Upon the N. Y., L. E. and W. R. R., between Hornellsville and the western frontier	37,696
Number of deaths on board cars	4
Number found sick with small-pox	3
Number sick with other diseases	38
Number removed to hospital care	6
Number of emigrant passenger cars inspected	2,414

The inspectors went on duty duly equipped for their work of close inquiry and sanitary advice. They were ready to vaccinate gratuitously any who were found unprotected against small-pox. To each person who thus received vaccination at their hands, a card like the following was issued :

STATE BOARD OF HEALTH OF NEW YORK.

☞ *Preserve this card and avoid detention or further trouble.*
Verwahrt dieſe Karte und entgeht allem weiteren Aufenthalt oder Unannehmlichkeiten.

CERTIFIED VACCINATION-CARD.
Beglaubigte Impfungs⸗Karte.

STATE BOARD OF HEALTH OF NEW YORK.

Passenger by New York........Railroad.
Paſſagier der New York........Eiſenbahn.

To Certify Concerning Protection against Small-pox.
Zur Beſcheinigung in Betreff der Protektion gegen die Blattern.

Examined........................1882.
Unterſucht.

Scars....................................
Schwären.

Vaccinated.. ....1882.
Geimpft.

Signed..................M. D.
Unterzeichnet. *Inspector.*

As shown by the statement of the Standing Committee on Quarantine in the Board's Second Annual Report, pages 234–274, the Health Officer of the Port of New York exerted the utmost influence and authority of his office to secure the effectual coöperation of National and international port regulations for protection against small-pox.

The President of the United States having by his approval and signature, November 14, 1881, given the authority of a statute to the conclusions of the National Board of Health,* the enforcement of inspections, as practiced at the American ports, and notably at New York, and of the requirements by this Board's inspectors upon emigrants passing through the State, rapidly demonstrated the intention and necessity of the methods adopted for fortifying the application of the rules which at last had thus become established under National law; and although the inspectors upon the emigrant trains found great numbers holding vaccination cards they had received on shipboard, who could not be regarded as protected against small-pox (so unworthily had vaccination been performed at the ports of departure, or on the ships), the influence and notification, which speedily began to be returned to the European ports of departure of emigrants, produced the good results which the inspections at the port and on the trains were designed to secure.

The National Board of Health promptly aided and greatly extended the organization of the emigrant train inspection, and assisted in establishing it as a system through certain of the Western States, for several months paying the salaries of all the train inspectors. The thoroughness of the final re-inspection, by the National Board's assistance, at Port Huron, where the Canadian and Grand Trunk railways enter Michigan, and at Indianapolis and Chicago added immensely to the security of the country against danger from emigrants unprotected against small-pox ; for whoever failed to present good evidence of protection was subjected to vaccination. In this important sanitary service the National Board of Health proved its ability and disposition to offer useful means of general protection of the public health throughout the entire country, by harmonious coöperation with the State and municipal sanitary authorities.

The ultimate organization of the inter-State and the National work was a realization of the purposes and efforts of the New York State Board of Health, which had been urged for two years. In these effort the Board steadfastly advocated the nationalization of the inter-States inspections and a system of temporary or extemporized hospital care. Circular No. 27 of the Board's Sanitary Papers was originally designed to facilitate the care which local health boards should be prepared to give when hospital care might become necessary. Not less than twelve such refuges were prepared, and still are available, for exigencies which sick emigrants and other badly-housed persons, when dangerously sick, may present. The conclusion is, that so great has been the improvement in the sanitary protection, especially in vaccination of emigrants at ports of departure in Europe, on ship-board and at the ports of debarkation, that already we witness, in a large way, some of the best results we desired and helped to secure in the emigrant inspection. In this work the Board of Health of New York has steadfastly maintained, and will ever assert, that the central National sanitary system — the Board of Health of the United States, at Washington, is a public necessity, required in the interests of the nations, as well as of our American States; required for protection of human life among all classes, most notably among the homeless and unsettled, whose misfortunes and any calamity of contagious sickness become a public burden and a measureless personal and family affliction to the sufferers and their friends. We say unreservedly, that the demands of humanity and the comity of nations now, and evermore must, require the existence of a National sanitary system.

---

* See pages 260-265, Second Annual Report State Board of Health.

[K.]

REPORT OF SPECIAL COMMITTEE ON EFFLUVIUM NUISANCES.

This committee has continued, under the Board's order, to investigate whatever complaints and sources of stench nuisance have come to the knowledge of the Board. During the year these have been chiefly

(1) Those of the Newtown creek region.

(2) Those complained of by inhabitants of Staten Island, in the region of the Kill von Kull.

(3) The Barren Island and Flatlands nuisance.

(4) The fertilizer storage nuisance.

(5) The waste and putrefaction of glutinous matters from starch and glucose factories.

The offensive and sickening stenches which arise from the Albany basin, and those which have been complained of in two successive years along the Erie canal, from Buffalo to Tonawanda and Lockport, being regarded as dependent upon certain misuses of State property, have justly been judged to require the attention of the Board of Health as well as of the Department of Public Works, and the several municipal governments within whose jurisdiction their causes of nuisance exist.

Nuisances of Newtown creek and vicinity. — As Newtown creek is but another name for stench nuisances, and as this committee showed in its report last year, it will require to be dredged, straightened and bulk-headed before its odious nuisance can be satisfactorily overcome, the committee deems it a duty to call attention again to the subject, and to urge the importance of the improvements suggested in the conclusions printed upon pages 364 and 365 of Second Annual Report of the Board.

The cause of the effluvium nuisance which were found existing at the time the Governor ordered the investigation in February, 1881, were then classed as manure dumps, extending nearly half a mile along the north bank of Newtown creek, where many thousand tons of reeking stable manure were heaped; ammonia works in the vicinity of the dumps; fat boiling in open kettles at various places; superphosphate fertilizer works; distillery works; places for recovering sulphuric acid from the sludge; and thirteen refineries of petroleum and its products.

Besides these, some thirty other offensive trades or businesses, offensively conducted, in that region contributed to the nuisance. Complaints upon which this Board's action was instituted, and which were followed up by the Governor's orders, were made by inhabitants of New York city. The Executive orders were issued only against such nuisances as affected in some manner the city of New York, whence only complaints had been received.

Complaints that were brought to the attention of the Board, subsequently to the first proceedings relating to offensive effluvia from manufacturers of cream of tartar, and from various nuisances at Blissville and in the region of Maspeth, Queens county, were referred to the local sanitary authorities.

Under the circumstances prescribed for the investigation of nuisances which the Governor had directed the Board to examine and report upon, these localized evils were not subject to the Governor's orders.

At the end of 1883, there remained only the petroleum refineries in operation, of all the factories and offensive businesses which this Board had reported upon as requiring Executive orders.

The guaranty of the petroleum refiners.—The guaranty which was officially signed by and for the refiners, dated August 29, 1881 (see pages 362–3, Second Annual Report), is believed to have been in the main faithfully complied with; yet there have been two or three refineries in which there were frequent exceptions; these were, however, among the refineries having least facilities for preventing nuisances, and the most indifferent policing of their premises.

Near the thirteen refineries for which the guaranty was given, a new company has been brought into existence, and has commenced its business offensively, producing stenches and smoke in the same way that other refineries once did. These offensive premises being wholly within the city of Brooklyn must, it is believed, be speedily brought under proper control of the sanitary authorities of that city.

Experience in the past eighteen months has proved, that it is practicable for any one of the petroleum refineries wholly to control the causes which render these establishments offensive and make the business itself at times a gross nuisance.

The essential points covered by the first guaranty herein referred to consist in the removal of all sludge waste, without exposure, to a distance of fifteen miles or more from any city.

2d. The control and prevention of all exposure and leakage into the atmosphere or elsewhere of any waste matter whatsoever from the tanks and stills.

3d. The control of all gases, vapors and odorous substances by means of complete combustion being found practicable, these requirements must continue to be enforced, and the Attorney-General has advised that all conditions and acts required under the orders of the Governor, as made on the 22d of April, 1881, should be under constant surveillance by this Board until unexceptional and constant compliance is secured.

Superphosphate fertilizer factories.—The entire removal of this class of nuisances from cities was long ago decided to be necessary, and the accomplishment of the result is merely a matter of time. All reasonable men who are engaged in the business concede this duty, and there now remain but a few factories of this kind within city limits in the metropolitan district. These should cease to use animal matters with sulphuric acid, or follow the other factories of the kind far away from cities and villages.

Utilization of waste animal matters: — bone-boiling, bone-burning. — The waste animal matters from nearly two millions of people are accumulated in vast quantities upon the borders of the metropolitan cities, and the processes by which they are reduced to the required conditions for utilization are exceedingly offensive.

The Board, by this committee, has found it necessary to take essentially the same view of this subject which the Local Government Board of England, through its central sanitary office, has recently taken, to-wit: to support the decisions of local sanitary authorities concerning offensive businesses, when "a nuisance or injurious to the health of the inhabitants and neighborhood," and to require "that the best available means be taken for preventing injury to the public health;" that in regard to the stench nuisances "the effluvium is the gravamen of the grievance complained of," and the fact that sick persons become worse under exposure to such nuisance, is quite sufficient as a basis for procedure to prevent it, without waiting to find complete demonstration that any particular disease or death is caused by a particular stench.

It is equally true, that the fact that the odors are sickening or distressing to great numbers exposed to them is a sufficient condemnation of them.

Inter-State obligations to prevent effluvium nuisances. — The vast extension of the petroleum trade and its refining factories, as developed on the New Jersey shore, has inflicted upon New Brighton, the front of the most populous and beautiful part of Staten Island, stench nuisances which the government of the State of New York has interfered with in the region of Newtown creek, where three cities were at once affected. It became necessary to devise ways and means by which the sanitary and judicial authorities of the two States should coöperate.

This somewhat difficult undertaking is now in progress with prospect of success, the chief capitalists in the refining of petroleum upon the Jersey shore, opposite New Brighton, having of their own part elected to submit to the State Board of Health of New York the decision of the question. What improvements shall be ordered and adopted to prevent effluvium nuisances from their factories?

This Board has accepted the duty thus indicated by request of the Attorney-General of New York, and the State Board of Health of New Jersey, and the local boards of Hudson county and the city of Bayonne, New Jersey, have united in the endeavor to secure all needed coöperation on the part of the judicial authorities of the respective States.

Though a part of the causes of the nuisance opposite Staten Island might be abated and prevented by interposition of the Federal courts as far as relates to the defilement and obstruction of the navigable waters of the Kill von Kull, between the two States, the chief evil that would remain to be treated would be the direct emanations of effluvia from the refineries themselves.

If, in the progress of the effort now undertaken to secure the interposition and comity of judicial action by these two contiguous States respectively, the fact should appear, as we trust it will not, that a great nuisance, affecting the inhabitants of either one or both of these States, cannot be abated and prevented by such co-ordinated or reciprocal action, then certainly a specific act of the Legislature should be secured in each State to provide for such reciprocity of action without delay, as will attain the desired end.

The fact must not be overlooked that, as a result of the long-continued pressure of sanitary restrictions within the metropolis of New York, offensive industries and legitimate trades offensively conducted have been successfully crowded out from that city, not only into the cities and towns near by, in the State of New York, but along water sides of extensive districts, in the State of New Jersey, from which the citizens of the suburbs of New York now justly seek protection. These effluvium nuisances which have thus become established far beyond the city of New York furnish cogent reasons for the contiguous States and the neighboring municipalities, villages and towns securing the benign operation of equitable reciprocity in the enactment of laws for the protection of the public health and the prevention of public nuisances.

Effluvium nuisance from the starch and glucosery wastes. — Public complaints concerning stenches arising from the Erie canal, not only from Hamburgh street, Buffalo, to Tonawanda, but even from Tonawanda onward to Lockport, were made to the Governor, and by him referred to this Board during the summer of 1882. Similar complaints were made directly to this Board. These led to the examination into the alleged causes of the nuisances complained of. The result of the investigation was summarized as follows:

ALBANY, *August* 19, 1882.

To Hon. ALONZO B. CORNELL, *Governor :*

SIR — The undersigned have the honor to return to you the papers which you referred to this Board for investigation and report on the 5th inst. These consist of:

First. A formal complaint by the board of health of Lockport, accusing the Hamburgh street canal, a channel of the western terminal section of the Erie canal, of causing a nuisance intolerable and dangerous to health in the city of Lockport.

Second. A communication from the health officer of Lockport, distinctly accusing the glucose manufactories and distilleries of Buffalo of so emptying and washing away their waste materials, as to cause the stenches, etc., which emanate from the Erie canal at Lockport.

Third. A communication from Hon. E. W. Rogers, mayor (now ex-mayor) of Buffalo, urging the Governor to cause action to be taken under advice of the State Board of Health.

Fourth. A petition from village officials and other inhabitants of the villages of Tonawanda.

These several communications, dated on the 3d and 4th of August, and in the autumn of 1881, have received the attention of this Board, as the following statement shows:

On the 9th inst. this Board directed its committee on drainage, sewerage and topography to proceed to Buffalo, Lockport and Tonawanda, there to investigate the facts relating to the sewage and waste matters by which the Erie canal is defiled, and its waters made to convey and emit foul emanations, offensive and injurious to the public health.

Investigation in Buffalo.— On the 15th inst. at 9 A. M., the committee of the State Board, as directed, begun its investigations, and at 11 A. M. proceeded with the mayor, the board of health, the health officer and city engineer, to examine the three glucose manufactories in that city. The two which were first visited are known as the American Grape Sugar Works, C. J. Hamlin, Esq., president and chief proprietor, and Dr. Geiseche, the superintending chemist. The first of these factories stands upon the bank of the Erie canal just north-west of the terrace. The second is situated on the southern bank of the Hamburgh street canal, near Chicago street. These two factories are managed under one capital and supervision, and are essentially alike. They are in operation day and night, and work up, according to the statement of Mr. Hamlin, about sixteen thousand bushels of Indian corn daily. All outflowing from each of these factories is conducted directly into the Erie canal or that section which is known as Hamburgh street. Such outflowing from them varies from three million to four million gallons daily, according to the statement of the responsible managers.

The third glucose manufactory is situated on Pratt street, in the eastern part of the city. It pours all its sewage and outflowing ultimately into Spring street sewer, thence into the Hamburgh street canal, a little way east from, and opposite to, Mr. Hamlin's glucosery No. 2. This third factory is the property of Dr. Firmenich. It is managed somewhat differently from the other two, and it pours into the canal daily from one million to a million and a half of sewage and washings.

Breweries.— Two of the largest breweries were examined, and the sewage and outflow from them inspected. The entire outflowing from the larger of the two was found discharging into open ditches that extend for a great distance in a sparsely-built-up region in the north-eastern section of the city. The proprietor and the inhabitants of that district regard the outflowing as a nuisance which ought to be controlled; but in an unsewered part of the city it has been suffered to exist hitherto. The amount of the sewage matter and waste is infinitely less than from the glucoseries. No other breweries and none of the distilleries were examined, nor were any of the starch factories inspected. One starch factory near Black Rock is known to discharge its waste and washings into the Erie canal. This will be reported upon at a future time. So important is it to report the chief sources of the inflowing of vegetable matter into the canal, ready to enter upon putrefactive decomposition, that the Board must limit its statement concerning the nuisances which it has investigated at Buffalo, to the three great glucoseries principally.

It is conceded and probably true that these three great factories for making glucose syrup pour into the canal vastly greater quantities of fluid than all the breweries, distilleries and starch factories in Erie county; for it is conceded that the outflowing from the former exceeds four million gallons daily, and that it may exceed five million gallons. The managers of the glucoseries state that the greater portions of the glutinous waste matters are contained in about one thousand barrels of the "first washings" of the macerated material in the process of precipitating the starch.

Results of the investigation.—In Buffalo the condition of the Hamburgh street canal and of the Erie canal, of which the former is a mere *cul de sac* or elongated slip, was examined. A deposit of slimy filth, several feet in depth, along the western terminus of the canal, and the milky appearance of the water in the canal are striking facts, not only at Buffalo, but at Tonawanda, nearly twelve miles northward, and even at Lockport. The vast quantities of lake water which pass into the Hamburgh canal at various points, into the Main and Erie canal proper, northward within the limits of the city of Buffalo, do not greatly impair the density of the gray mixture which appears in the canal water as it flows onward toward Lockport. This is a color and quality of the canal water which no ordinary sewage matter ever imparts. It is not necessary to decide how much of it is due to the glucoseries, as it is not denied that it is largely derived from them.

This Board does not deem it necessary to recite all the statements volunteered by persons who attended at the inspection, and who undertook to argue that the glucoseries and starch factories had no share in producing this floating mass of finely divided vegetable matter that is found floating in the canal for thirty miles and upwards. Even the forty-eight million gallons of fresh water, which as the president of the Buffalo board states are daily poured into it from the lake on the south side of the canal, seem to have little influence in diminishing the milky and gray color, or thinning the slimy volume of water in the main canal within the limits of the city. In view of the facts here mentioned, and of the accusations which have been made by the Lockport board of health; it has been necessary to ascertain by inspection what the outflowing from the glucoseries consists of, and what is its probable amount daily.

In Lockport it was necessary to ascertain in what manner, at what times, and with what results the canal nuisance is suffered.

At the villages of Tonawanda, twelve to sixteen miles north from the glucoseries, it was necessary to ascertain precisely the bearing of the same facts as those investigated at Lockport.

The Board proceeded accordingly to obtain whatever facts were immediately attainable within and near these three places.

In Buffalo.— The Hamburgh canal extending from Hamburgh street on the east, where Little Buffalo creek enters as a sewer, to the Main street bridge, a distance of one and a quarter miles, is an enormous cess-pool, causing a stench-nuisance which is offensive for a great distance. Into it are poured the sewage and washings of two glucoseries, which work from ten thousand to sixteen thousand bushels of corn daily.

A little north-westward from the Main street bridge on the north bank of the canal proper stands the third glucosery, where from four thousand to eight thousand bushels of corn are crushed daily and subjected to the processes of glucose making. The washings and outflowings from these three glucoseries are poured directly into the mass of filth and slime which constitutes a large proportion of the total volume of canal contents, not then offensive to the smell, but consisting of most putrescible material. These glucosery sewage matters and washings are thus placed in contact with the fermenting and seething filth of the canal, and are moved onward, toward Tonawanda and Lockport, at the rate of from one to three miles per hour.

Nature and quantity of the material thrown into the canal from the three glucoseries.— The starch, which is to be transformed into glucose, constitutes from fifty to sixty per cent of the total weight of the corn. Counting it, as is now usual, at from fifty-five to sixty per cent, the residue of every hundred parts weight of the corn consists of from twenty-five to thirty parts of glutinous, cellulose and various nitrogenized matters. The remaining ten to fifteen per cent would be classed as husky, woody and fatty matters. Out of the twenty-five to thirty per cent of glutinous and various other matters counted as nitrogenized, only a small percentage is saved in the processes of the factory. How much of them need not here be a question, as it is conceded that half or more of the twenty-five to thirty per cent of such residuary and more or less nitrogenized matter runs off into the canal as waste.

The total quantity by weight of corn substance which is daily thrown into the canal at Buffalo from the glucoseries alone is probably never less than ten per cent of the total weight of corn used, and it may exceed fifteen per cent. As before stated there are from twenty thousand to thirty thousand bushels of corn daily used in the three glucose factories, or from 700 to 840 tons. The ten to fifteen per cent of this vast quantity, which is daily cast into the canal as waste, is material of the most fermentable and putrescent of the corn substance, and its weight would be from 70 to 126 tons daily, estimated as solid corn-substance. The chemist of the American Grape Sugar Company testified that at least two per cent of glutinous materials escape in an insoluble form. This alone would be from fourteen to nearly seventeen tons of solid gluten daily. The same eminent authority also testified to the correctness of the well-known fact, that the alkaline treatment to which the whole mass of crushed corn is subjected carried away a great but unknown quantity of nitrogenized matter in a state of solution. So much for the nature and quantities of vegetable matter that is carried away in the sewage and washings from the glucoseries. It is simply an enormous quantity, sufficient to keep the canal waters filthy and in a state of fermentation for a distance of thirty miles on the course through Tonawanda and Lockport. For all practical purposes in deciding whether the glucoseries have a leading share in the putrescence that causes the stench that is complained of in the villages of Tonawanda, and in the city of Lockport, and by boatmen and workmen upon the canal for a distance of forty miles of its course, this concise statement should suffice, believing, as the undersigned do, that whatever share other manufactories and businesses, and the total outflowing of ordinary sewage in Buffalo may have, in the general defilement of the Erie canal, there need be no hesitation in concluding that it is this vast quantity of inflowing vegetable matter, ready to take on the most intense kind of putrefactive change, and to give forth the most sickening and intolerable stench, that must first and separately be dealt with in reference to repression, abatement, and, as far as possible, total prevention.

Leaving this line of investigation as pursued at Buffalo, where after careful personal inspection there was a full and patient hearing given to all who had facts to present, the following results of investigation were obtained at Lockport and the village of Tonawanda:

At Lockport.— On the morning of the 16th inst., the board of health and a large assemblage of citizens received the committee of the State Board, who entered upon the hearing of evidence concerning experience in this city. The details of the testimony and proofs obtained at that hearing need not here be recited. Suffice it to say, the proof is conclusive that the inhabitants, and all who do business upon and near the Erie canal in that city, suffer greatly from an intolerable stench that varies in intensity and in an inverse ratio to the excess of the flow of water in the canal. In other words, in proportion to, *first*, the reversed flow of the Tonawanda river eastward from the section where the Erie canal enters the channel of the Tonawanda; and, *second*, in proportion as there is an excess of inflow of water from Lake Erie, at the city of Buffalo, when aided by winds or an unusual height of lake-water. The nature of the causes of the intolerable odor of the canal water at Lockport may be estimated fairly by the peculiarity of the stench from the slime in, and the appearance and color or opalescence of, the water. Other demonstrations of the nature of the cause of the stench need not be demanded in the present stage of the investigation, and for determining the first step in the duty of attempting to control such causes as are preventable.

At Tonawanda.— The proof is found to be incontestable, that in both villages, which are divided by the Tonawanda river and situated in the counties of Erie and Niagara respectively, the inhabitants have, for three or four years past, been suffering throughout the entire warm season and into the late autumn, from the same, but more intensely intolerable, stench which the board of health of Lockport and all the inhabitants complain of. That the public health in the villages and vicinity of Tonawanda is suffering seriously from this nuisance scarcely admits of a doubt. The appeal of the people there corroborates and greatly enforces the appeal from Lockport.

Conclusions and recommendations.— On behalf of the State Board of Health, the undersigned respectfully submit to the Governor that applying common sense to plain facts, and logical rules to the evidence as presented in this investigation at Buffalo, Lockport and Tonawanda, there should be no hesitation in holding responsible for the most essential and preventible causes of the stench nuisance at Tonawanda and Lockport, which is peculiar and of recent date; namely, within the last few years, and chiefly within the past three years,— the glucose and starch industries which use macerated corn in the separation and manipulation of starch.

Further, the evidence obtained in this investigation shows, that there are three stages, or subdivisions, in the manipulation of starch at the glucoseries, in the course of which the several and separate washings convey away the glutinous and other finely divided matters, that are in nowise repressed and prevented from being conducted into the Erie canal; that these successive washings are quite variously burdened or dense with such fermentable and putrescent matters; that the first of these three washings contains the greater part of all the putrefactive material, which may be wholly disposed of; and that, in the judgment of the chemists and of persons of experience who have been consulted, the said matters may be mostly, if not entirely, repressed and rendered innocuous, and that the greater portion of them may be separated from the waste waters, that must, because of their vast quantity — from four to six million gallons daily from the glucoseries — ultimately flow into the canal or be carried into Lake Erie.

As it is inexpedient to adopt the latter course of outflow, on account of the necessity of preserving the purity of the waters at the head of the Niagara river, the complete repression of all organic matters until separated, or rendered entirely innocuous by chemical and chemico-mechanical treatment, appears to be an inevitable necessity, to be accepted and acted upon by the proprietors and managers of all glucoseries and starch factories which now turn their sewage and outflowing into the Erie canal.

Recommendations.— The logical sequence of the foregoing conclusions, which we present as the only recommendation that is necessary under the circumstances, and which need not await any of the exact chemical findings which the State Board is causing to be made, is, that each and all of the glucose and "grape sugar" manufactories, in the city of Buffalo or elsewhere, which are now discharging their sewage and waste outflowings into the Erie canal, directly or indirectly, should forthwith be required to repress, control, separate or render permanently insusceptible of fermentation and putrefaction, all and every kind of organic matter which is contained in the sewage and outflowings from the said factories.

"At a meeting of the Board, November 18, the chemical evidence was presented, and the following resolution thereupon adopted:

Resolved, That after a careful examination of the works at Buffalo by joint committees of this Board, and the chemical analysis of the various kinds of refuse, it is the opinion of the State Board of Health, that the pollution of this water by these factories is entirely unnecessary to the carrying on of their business, and may be completely obviated without in any way interfering with it."

The results of the chemical investigation are shown in the following statement:

Waste Liquors from Grape Sugar Works, Buffalo, N. Y.
(*Parts in* 100,000.)

	Reaction.	UNFILTERED.		FILTERED.		Solids in suspension.
		Solid residue.	Loss on ignition.	Solid residue.	Loss on ignition.	
AMERICAN GRAPE SUGAR CO.:						
Water from steeping tanks	Acid ...	1,735	1,470	1,499	980	236
Water from starch settlers	Acid...	92	56	85	51	7
"Alkaline" water from starch tables	Neutral.	1,762	1,441	546	288	1,216
Water from washing starch	Neutral.	153	58	126	34	27
Wash-water from bone-black filter	Neutral.	124	32	79	35	45
BUFFALO GRAPE SUGAR CO.:						
Water from steeping tanks	Acid ...	2,588	1,991	1,740	1,000	848
Water from starch settlers	Neutral.	88	55	83	55	5
"Alkaline" water from starch tables	Neutral.	1,818	1,586	466	219	1,352
Wash-water from bone-black filters	Neutral.	1,254	1,030	1,154	919	100
FIRMENICH SUGAR REFINING CO.:						
Water from steeping tanks	Acid...	567	446	402	356	165
"Alkaline" water from starch tables	Neutral.	1,536	1,357	336	133	1,200
Same acidified by sulphuric acid	Acid...	2,218	2,011	703	349	1,515
Same after settling	Acid....	817	497	.....*	.....*	....*
Wash-water from bone-black filters	Acid....	1,456	1,384	1,342	1,238	114

* Quantity insufficient for determination, Oct. 31, 1882.

CONCLUSIONS BY THE COMMITTEE.

Thus far, the nuisances upon which this committee has reported in favor of action for their abatement and prevention by the Governor could not be reached and controlled, especially the causes of them and the persons responsible for the offenses resulting, by the local authorities of the communities which suffer most from them. The first of these sources of nuisances that have come under sanitary regulation were the great refineries of petroleum. The task they undertook has proved a difficult one, yet entirely practicable; and had not newly-established refineries failed to recognize the same obligations as the twelve which regulated their works under a trustworthy guaranty, this class of stench-producing factories would have been quite satisfactorily conducted.

This committee has endeavored to bring the new refineries under the same regulations as the others, and is now likely to succeed in the effort.

The permanent removal of the superphosphate works, the ammonia works and certain other sources of stenches in the Hunter's Point region, which were offensive across the East river for a great part of the width of the city of New York, has been accomplished without the intervention of court proceedings, or any violence to property, though aided in certain instances by the sheriff under peremptory orders of the Governor. The offensive businesses and many an industry that is offensively managed along the margins of Newtown creek, and the vast swampy inland region at its head, have, from the time of their planting and expansion, been a gross nuisance to travelers upon the public thoroughfares, and to an extensive suburban region in Kings and Queens counties. If the local sanitary authority proves inadequate properly to regulate and prevent noxious effluvia from these numerous places, then, certainly, the authority vested in the State can be usefully interposed; yet in thus dealing with these unpleasant problems of sanitary policy and public decency, this committee bears in mind the fact, that the utilization of waste materials, animal and vegetable, which have to be taken away from the premises of the two millions of people that crowd the metropolitan cities and suburbs, is itself a most important sanitary necessity, and, for this reason, whenever this Board and the Governor have disturbed or laid restrictions upon any of these avocations, better ways and means of management have been studiously presented as an alternative previous to the invocation of such executive authority.

[L.]

SANITARY GOVERNMENT, PRINCIPLES AND FACTS.

[Abstract of a paper presented to the American Public Health Association at its Tenth Annual Meeting.]

By Hon. Erastus Brooks.

* * * * * * * * *

I speak now as a member of the State Board of Health, of one of the largest States of the Union, and as a citizen for many years in the State's service in the Legislature, and in its recent conventions for making and amending the fundamental laws of the State. I believe in the missionary work of education, through voyages of discovery for the detection of the causes of physical disease, for the exposure of vices, crimes, ignorances and neglects which injure, if not the souls, at least the bodies of men. I believe in voluntary, manly and benevolent service to perform this work. Professional service is wise, necessary and just, whether in the pulpit, where "the violated law speaks out its thunders," in the will, study and toil of the physician, whether selected to "minister to the mind diseased," or to the temple of the human body, where so many diseases are born, retained, transmitted, inherited, and in the labors of those appointed to make, administer, and consider the civil and criminal laws of the land.

These persons are all appointed for specific, intelligent, and responsible work, which engages the time and study of a million or more of its citizens. But I wish especially to speak of those mental and bodily interests which include not only this single million of teachers, but of the fifty millions, old and young, in the land not included in what is called professional work.

There is a higher law than professional service, born of the Giver of all good, implanted in the best thoughts and affections of men bearing the image of the Creator, and destined, if physical pain and misery are ever finally removed, to secure that end chiefly through the good will and good work of voluntary service, each working together in harmony for the preservation of life, health and human happiness.

THE PREVENTION OF AVOIDABLE DISEASES

is one of the first purposes of a wise government. The cure of bodily disease belongs to the physician, and latterly, happily for the State, the physician in unselfish methods of counsel and conduct endeavors to prevent disease and mortality in the best way that promises the removal of disease. He who saves a life, lessens a pain, or prevents a disease, is a public benefactor; and in this humane work the wise and faithful physicians take the lead. In the presence of such a truth it is not worth while for laymen, at least, to quarrel about schools or forms of medical practice, and all the more at this time, is this true as just now, the country, as never before, is engaged in this work of health education. As a layman, I am glad to see scientific sanitary discoveries more and more developed from year to year, under established forms of law, and when the law is complete, science and law thus embodied and united, the result will be for the common good and in its uses one of the best gifts of God to man. The death rate will yet be reduced to about one-half of its present proportions, and the infirmities of age, the inheritable diseases, and the accidents of life will become the only causes of death.

In a Dublin lying-in hospital eighty years ago infant mortality was reduced sixty-eight per cent simply by sanitary purification of the hospital and the hands of the hospital attendants. I have seen even a much larger saving of infant life than this in New York from like causes, and by additional care as to food, ventilation and cleanliness. If we could take in what past generations have communicated to the present, and the present often foreshadows the future, there would be amazement at past neglect and present ignorance and indifference in the saving of life and in the preservation of health. Let me then just here present, more for the audience outside of this chamber than for those within it, some facts which are the fruits of observation, study and experience.

First. While sanitary legislation is a public duty, sanitary instruction is the preliminary duty which will secure wise legislation. Lord Derby once said, and with great truth, that you cannot make a population cleanly or healthy against their will, and "where there is the will, there is the way," and the will and the way mean both private inclination and the power to apply it. Dr. Wm. Farr, of the English Registrar-General's office, embodying this higher law I have before referred to, has also said that "the hope of saving any number of human lives by hygienic appliances is enough to fire the ambition of every good man who believes in human progress." By these two methods definite human progress is made in all sanitary work and in science itself.

Second. The welfare and safety of the State are not only matters of paramount importance, reaching to all pursuits, occupations and employments of individuals, but the question of the public health takes by legal prescription precedence in this order of State work. In the case of the Commonwealth *v.* Upton, in one of the States, Merrick, Judge, has so decided under this ruling. I may add that recent facts demonstrate the truth that no form of government, local or general, can afford to neglect rules and regulations resting upon the public safety and needed for the prevention of disease or the promotion of health. Whether the death rate is ten, twenty, or more in each thousand people, depends upon the rule relating to public health, and this rule should become statute law.

Third. The best sanitary work is performed from the love of knowledge and the love of men. This statement is not a sentiment merely, but an established fact. Sanitary investigation and work in the past have added in longevity alone thousands of years to human existence and inestimable blessings to human comfort, and, judging of the future by the past, we may conclude, that this is but "the beginning of the end."

Fourth. Morally, as well as physically, it is true, that every thing in nature begets its kind. It is no more true that moulds and moisture are sources of disease and decay (the increased growth of which may be prevented and must be, if we would have healthy houses), than it is true that neutral disturbances come from moral and physical disturbances. In the one case, to secure the healthy home the damp, mouldy places of the homestead can be overcome by a simple process of fumigation with sulphur. By the same process, at times decomposition and putrefaction may be prevented. Certainly as much as this can be said of the proper treatment of the human body. Those two texts in Holy Writ, "Know ye not that your bodies are the members of Christ," "Know ye not that your body is the temple of the Holy Ghost," are as much sermons for a healthy body as for a moral life; and if the pulpit and the schools, the press and the forum would more frequently illustrate these texts to those whom they instruct and teach, there would be far more of physical education and improvement, and the schools would be vastly more advanced than they are at the present time.

Fifth. Education is at present defective. One class of children are forced or persuaded to attend our common schools to secure an education for future life, while another class of the same age, less fitted for work and needing education, are crowded for eight or ten hours in the factories and workshops of the country. Beyond this neglect, which is next to a crime, it is also true, that half of the diseases of children are either inherited or the direct fruits of vicious lives and bad examples.

The State may not freely correct this evil, but it can discuss it, expose it, and enlighten public opinion in regard to it.

Another source of danger to public health is to be traced to modern ideas of the necessity of what is called "advanced education for females," a kind of education in which hygiene has little or no part, though presented to the world as intellectual culture. Better would it be, in order to prevent this humane degeneracy, to give more attention to the health of the temple of the human body as the temple of the Holy Spirit.

In Germany, where so much attention is given to education, it is said, ninety per cent of all the physical deformities that have come under the notice of physicians date from the time when the pupils attended school, and "the character of these diseases often correspond, it is declared, exactly with the position occupied by the children in writing."

Sixth. Disease also largely results from the lack of proper ventilation. From lack of proper light, let it be always remembered, the eyes are injured. Every little child, to be healthy, requires 2,000 cubic feet of pure air each hour, and the demand grows, according to age, up to 25,000 cubic feet for the adult.

The New York State Board of Health upon this one subject,—besides presenting a very able report from an expert scientist,—has issued a circular with sixty-eight special questions relating to light, heat, time and ventilation; and one of the most gratifying signs of the times is the general demand for copies of its reports and sanitary papers

Seventh. The half of the plagues in life come from what are known as infectious diseases and contagions, and these are controlled by remedies which practically stamp out what are known as general zymotic diseases. Living ferments is but one name for this source of disease. Many, if not most, of this class of bodily ailments,—as for example, measles, small-pox, and cholera,—originate outside of ourselves. But though these diseases spread fearfully, as a rule, they come but once in a lifetime. Not so with dyspepsia and rheumatism, which are often life-long tortures. No wonder that in our cities one-half of those who die, die under the age of five years, or that rheumatism, from which there is so much suffering, produces even degeneracy of race in families whose means are straightened. Intoxication is another cause, both of degeneracy of race, and at times of great mortality. Then comes the vices which belong to an inherited constitution for which children are not responsible; and this is just where the sins of the parents, by some mysterious Providence, are visited upon their children to the end of the third and fourth generation, if not to the end of time. It is just here also, for reasons too apparent to need comment, that parents in certain conditions of life may well pause before they consent to bring children into the world to inherit their own infirmities of the flesh. Better perpetual celibacy than diseased children.

The wonder, all things considered, is, not that so many children die, but that so many live, not that those whom the gods love die young, but that any of these children of poverty ever reach old age or middle life.

Eighth. In a just consideration of the health and mortality of the country, the subject of food must not be omitted. Men who make, or try to make, what are called "corners" in wheat, corn, and meats (to fill their own pockets with ill-gotten gains, with profits wrung from famishing people, who thrive as much by speculation upon the misfortunes of others as in their cultivated vicious skill in helping themselves), rarely take in the truth that death and disease are very often dependent upon dear food. The worst diseases and the largest number of deaths are seen where there are the highest prices of food.

Dr. Farr, in England, found that the death rate in the English population falls three per cent for each decrease of two shillings in the price of wheat. M. Messance, an eminent French writer, proves the same fact, that the gauge of health is the cheapness of food I may add the kindred fact, that among the poorer classes, the number of marriages bears an inverse ratio to the price of wheat. Emigration also is sometimes governed by the price of breadstuffs in a direct ratio. The physical in connection with the mental symptoms of hunger or deprivation of food are stated by Mueller to be "feelings of general debility, actual and gradual loss of strength, fever, delirium and violent passions alternating with the deepest despondency." Suicides also increase with every definite crisis in agriculture.*

Crime may also be traced to dear food, and scientists have demonstrated the precise increase in mortality from this cause in Germany and elsewhere.

In the sick-room, and especially for the children there must be perfect nutrition, and yet how deplorably insufficient is the nutrition in the dwellings of the poor, the depraved and the negligent. One of the authorities before me declares that general distress and destitution in England increase crimes of all kinds,— very serious offenses and assaults excepted,— in the following ratio :

General crimes and distress	24	per cent.
Crimes against property with violence	50	"
Breaches of the peace, etc	90	"

While other writers make the percentage much less, all agree that cheap food is an element of order, comfort and contentment, and dear food produces the opposite result. In four years from 1878, the increase in the cost of grain was fifty per cent, in meats forty-four per cent, daily products seventy per cent, clothing twenty-six per cent, and in sugar and other articles from fifteen to twenty-one per cent. Mr. Grosvenor, of New York, also makes the comparative *per capita* increased cost from $81.40 to $111. The advance in food alone has been almost thirty-six per cent, and the increase in wages is not in proportion to the increase in cost of the necessaries of life. The food question is one that should be considered as well in its effect upon general health as from the standpoint of physiology and political economy.

Maxims and facts.— If there is to be any idolatry in this world, let it be the worship of pure air, water and of the sun as the source of light and enemy of filth.

When Lady Mary Wortley Montague, about one hundred and sixty years ago, as wife of the British Ambassador at Constantinople, learned that the Turkish villagers were in the habit of inoculating for small-pox she caused the operation to be performed upon her own child and subsequently introduced the practice into England. Two noble ladies also consented to be inoculated after this example. In this spirit thoughtful and capable men united in action when the cholera visited the land in 1866, when it was placed under control of enlightened sanitary authorities. In the same spirit, ten years since, the American Public Health Association was organized and the National Sanitary Conferences in 1857, '58, '59 and '60.

As a rule, health boards are unpaid officials, and their hardest work is to teach men how to keep in health, how to avoid disease, how to take care of children, families, dwellings and work-shops and last, not least, not neglecting the beasts of the field, as the faithful bearers of so many of our burdens and the source of so much real personal comfort.

---

* See Moeselle on the increase of suicides in Italy, England, France, Austria, Sweden and Germany generally.

In regard to this subject of animal life and disease there is occasion for constant vigilance. Animal refuse of all kinds may be the source of disease.

Supplementary notes by Mr. Brooks read at same meeting

THE NEW YORK STATE BOARD OF HEALTH

was organized in June, 1880, and was charged not only with the administration of the organic law which created it, but with all statutes relating to sanitary administration then in existence. Its membership is limited to three State Commissioners of Health, appointed by the Governor and Senate, three appointed by the Governor alone to represent sanitary government in large cities, and three *ex-officio* officers, namely: The Attorney-General, the Director of the State Survey and the Health Officer of the Port of New York. The Board at once organized several standing committees, issued a manual of State laws, and as soon as possible addressed itself to the local governments in the twenty-four cities, three hundred and forty-one villages, nine hundred and forty-seven townships and sixty boards of county officers within the State. To this large work it soon added the more laborious service of addressing the eleven thousand four hundred and forty school districts in the State, making all in all a communication with twelve thousand seven hundred and ninety-four organizations. Constant knowledge of and communication with all these official bodies has become a public necessity, and additional correspondence with medical and official persons increases the total to fourteen thousand three hundred persons or bodies. All of this number perform duties relating to the health of the people and the sanitary condition of communities. The more important duties of the Board may be classed under the following ten heads:

First. Organizing and instructing local boards of health — sanitary boards.

Second. Sanitary instruction to the people.

Third. Investigation of complaints and petitions.

Fourth. Expert work of selected medical investigators and the reports to the Board by these experts.

Fifth. Enforcing and testing laws and practices relating to the public health.

Sixth. Sanitary care and control of public institutions and schools.

Seventh. Causes of, and remedies for, small-pox, diphtheria, etc.

Eighth. External and internal conditions of the public health with the duties of local boards of health in registration, vaccination and in vital statistics.

Ninth. Investigation of endemic, epidemic and all contagious diseases.

Tenth. Drainage, sewerage and domestic hygiene.

All these subjects are constantly before the State Board, and involve a vast amount of labor on the part of the Secretary and his assistants.

In a continued work of investigation the State Board has also exposed the stench nuisances in many parts of the Commonwealth and required their removal, especially in the manufacture of petroleum and superphosphate fertilizers. In these and kindred industries, over forty millions of capital are employed. All these industries and the people complaining of them have had a patient hearing, and the causes of offense have been largely removed. Nine-tenths of the stench nuisances in and near the cities of New York and Brooklyn have been abated or the business forced out of existence.

Apart from this kind of work, more than twenty miasmatic and malarial swamps and ponds have been examined by experts under direction of the Board, or on the call of the Governor of the State for information. Portions of the abandoned canal have received the same care and with the best results.

Beyond this kind of work the Board, upon earnest call of the people, have visited different parts of the State where their presence and advice were asked for and needed. The Board have issued some sixty different circulars, papers and documents relating to the public health. These papers together include 360 pages of closely printed and useful matter.

The work of the Board has been in constant advance of the requisitions of the State statutes. In discussions, writings and appeals, its action covers all material questions relating to miasma, contagion, exposure, drainage, sewerage, and the sanitary condition of all classes and conditions of people, and especially in what belongs to school houses and children in the schools.

As a satisfactory record of the progressive work of the Board, about one thousand town or local boards of health have been established, and the whole people and the whole area of the State have been studied, especially in localities where disease has prevailed or been threatened. All that belongs to practical chemistry, whether in the laboratory or beyond it, in questions of health, have been called into service under the one or the other of two recent State laws relating to questions of health. For this special work the State has been divided into three districts, for the analyzing of water, food, drugs, illuminating oils, etc., with four chemical laboratories and four analysts, and one inspector.

Such a work, in which more than five millions of the people are interested, may be said to have no end, or, at least, to require constant care and vigilance.

General Conclusions.

I. In seeking sites for homes or business, all ill-drained and low-lying districts should be avoided, as these are the sources of typhoid fevers and malarial diseases.

II. As it is in evidence in England, Russia and elsewhere, that tens of thousands of lives have been saved by proper quarantine, management and treatment of diseases, encouraged and protected by governments that value human life and health, there ought to be in our Federal government a permanent Bureau of Health. Where material interests receive so much attention, and more than 100,000 government agents are paid to provide for them, something is due to the mental and bodily interests of the whole people. Sanitary organizations are essential for the towns, the States and the Federal government.

III. As a general rule there should be unity of action in the supply of drinking water for the people in all large villages and in the cities. The same united action should exist in regard to sewerage and drainage. Dean Stanley's death, it is said, was due to the condition of the trunk sewer and house-drainage in the district where he lived.

IV. Sanitary administration means not only personal comfort and health in the family, but economy to the State and the family. Two hundred and fifty thousand lives lost, three million cases of sickness and $20,000,000 in money are traced, in one decade in England alone, to neglect of sanitary care. The sword and musketry are terrible ministers of death; but even in armies, where battles kill one person, disease kills at least three. At one time, the death rate in India was sixty-nine in a thousand, but in the last decade by wise sanitary administration it has been reduced more than two-thirds with a corresponding increase of wealth and every worldly comfort. Such a record renders comment needless.

V. Schools should all be under the inspection of local boards of health. They are often the radiating centers of the diseases of children. Where a child is found sick in school or other public place, the house should be visited.

Hospitals and charitable institutions should be limited in the numbers allowed to be received, to prevent crowd poisoning and the spread of disease among inmates.

VI. Domestic isolation and quarantine are best where there are intelligent nurses, and willing or intelligent people to be cared for. Cleanliness of person and of clothing and the frequent change of apparel, the removal of every thing offensive and the non-use of the same vessels for food or drink are the only "charms" that ward off contagions.

If possible let there be but one nurse and a free current of air in cases of real sickness. In twenty years' experience, I have known at least one nurse who always kept every case of disease from the other members of the family. Home treatment in all cases is, as a rule, safer than the best hospital care, necessary as at times the latter may be.

[M.]

THE PERMANENT SERIES OF SANITARY DOCUMENTS

ISSUED BY THE

STATE BOARD OF HEALTH.

AN ACT TO ESTABLISH A STATE BOARD OF HEALTH.

CHAPTER 322, LAWS OF 1880.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

State Board of Health, how constituted.

SECTION 1. Within twenty days after the passage of this act the governor shall appoint, by and with the advice and consent of the senate, three State commissioners of health, two of whom shall be graduates of legally constituted medical colleges and of not less than seven years' practice of their profession. The said commissioners, together with the attorney-general, the superintendent of the State survey and the health officer of the port of New York, who shall be ex-officio members of the State Board of Health, and three other persons to be designated and appointed by the governor, one of whom shall be a commissioner of health of the Board of Health, of the city of New York, and the others shall be members or commissioners of health of regularly constituted and organized Boards of Health of cities of the State, shall constitute the Board of Health of the State of New York. Nothing in chapter three hundred and thirty-five of the laws of eighteen hundred and seventy-three of the State of New York or in the laws amending the same, or in the laws constituting Boards of Health in the various cities of the State, shall be read or construed to prevent the appointment of the said commissioners of Board of Health of cities also members of the Board of Health of the State of New York, and no appointment to an office, or acceptance thereof under this law, shall be held to vacate the office previously held in any Board of Health of any city in the State.

Oath of commissioners.

Term of office.

Vacancies, how filled.

§ 2. The said three commissioners so appointed shall take the oath of office prescribed by the constitution for State officers, and receive from the secretary of State certificates of their appointment. They shall hold office for three years, and whenever a vacancy occurs, the place shall be filled as in other cases provided by law, and the other commissioners shall, from time to time, be designated by the governor as occasion may require, or as their places may be vacated in the Board by the expiration of the several terms of office.

Meetings of board.

Traveling expenses, etc., of commissioners to be paid.

§ 3. The State Board of Health shall meet at least once in every three months and as much oftener as they shall deem necessary, their first meeting being held in the city of Albany within two weeks after the appointment duly made of the members of the first Board and after they shall have qualified as aforesaid, and each annual meeting shall be held within two weeks after the first of May each year after the first as herein provided. No member of the Board except the secretary shall receive any compensation, but the actual traveling and other expenses of the members and officers of said Board while engaged in their duties shall be allowed and paid out of the appropriation made for its support. They shall elect annually one member of the Board to be president; they shall also elect from among their own members or otherwise, a person of skill and experience in public health duties and sanitary science, to be the secretary and executive officer of said Board, who shall have all the powers and privileges of a member of the Board except in regard to voting upon matters relating to his own office and duties as secretary, and he shall hold said office for the term of three years, but he may be removed for cause after a full hearing by the Board, a majority of the members voting therefor.

President to be annually elected. Secretary to be executive officer, and to hold office three years.

§ 4. The State Board of Health may adopt by-laws regulating the transaction of its business, and provide therein for the appointment of committees to whom it shall delegate authority and power for the work committed to them, and it may also adopt and use an official seal. Five members shall constitute a quorum for the transaction of business.

Board may adopt by-laws. Seal. Quorum.

§ 5. The secretary shall keep a record of the acts and proceedings of the Board, perform and superintend the work prescribed in this act, and such other duties as the Board may order, and shall receive an annual salary of three thousand dollars, which shall be paid him in the same manner as the salaries of other State officers are paid, and such necessary expenses shall be allowed him as the comptroller shall audit on the presentation of an itemized account having vouchers annexed, together with the certificate of the Board.

Duties and compensation of secretary.

§ 6. Said Board shall take cognizance of the interests of health and life among the people of the State, they shall make inquiries in respect to the causes of disease, and especially of epidemics, and investigate the sources of mortality, and the effects of localities, employments and other conditions upon the public health. It shall be the duty of said Board to obtain, collect and preserve such information relating to deaths, diseases and health as may be useful in the discharge of its duties, and contribute to the promotion of the health or the security of life in the State of New York. And it shall be the duty of all health officers and Boards of Health in the State to communicate to said State Board of Health copies of all their reports and publications; also such sanitary information as may be useful.

General duties of Board.

§ 7. It shall be the duty of the State Board of Health to have the general supervision of the State system of registration of births, marriages and deaths, and also the registration of prevalent diseases. Said Board shall prepare the necessary methods and forms for obtaining and preserving such records, and to insure the faithful registration of the same in the several counties, and in the central bureau of vital statistics at the capitol of the State. The said Board of Health shall recommend such forms and amendments of law as shall be deemed to be necessary for the thorough organization and efficiency of the registration of vital statistics throughout the State. The secretary of said Board of Health shall be the superintendent of registration of vital statistics of the State. As supervised by the said Board, the clerical duties and safe keeping of the bureau of vital statistics thus created shall be provided for by the comptroller of the State, who shall also provide and furnish such apartments and stationery as said Board shall require in the dis-

Board to have supervision of vital statistics of State, and to recommend necessary legislation.

Board to prepare forms for, and regulate use of, transfer permits.

Violation of regulation a misdemeanor.

charge of its duties. And the State Board of Health shall also prepare the necessary methods and forms and prescribe the rules regulating the issue and use of transfer permits, with the proper coupons attached thereto, to be issued by local organized Boards of Health, for the transportation of the dead bodies of persons which are to be carried for burial beyond the limits of the county where the death occurs; and in all cases, the State Board of Health shall require coupons to be attached to such permits, to be detached and preserved by every common carrier, or the person in charge of any vessel, said railroad train or vehicle to whom such bodies shall be delivered for transportation. Any violation of such rules and regulations shall be a misdemeanor.

Governor may require Board to examine and report on nuisances, etc. Report, where to be filed.

Governor may order nuisances abated.

Violation of order a misdemeanor.

Dist. attorney, sheriff and other county officers to cause the execution of the governor's orders.

The county to be responsible for costs, which shall be a lien on property of offenders.

§ 8*. At any time the governor of the State may require the State Board of Health to examine into nuisances affecting the security of life and health in any locality, and in such cases, said Board of Health shall have all necessary powers to make such examinations, and it shall report the results thereof to the governor, within the limits of time prescribed for such examination and report. The report of such examination, when approved by the governor, shall be filed in the office of the secretary of State, and the governor may, in relation to things found and certified by the said Board of Health to be nuisances, declare them to be public nuisances, and order them to be changed, as he shall direct, or abated and removed. And such order shall be persumptive evidence of the existence of such nuisance, and all persons maintaining, or assisting to maintain, or aiding and abetting, in any manner, in the maintenance of such nuisance, after notice of such order, shall be guilty of a misdemeanor, punishable by fine not to exceed one thousand dollars, or imprisonment in the county jail of the county in which such nuisance is maintained, not to exceed one year, or by both such fine and imprisonment. In such cases, when such order has been made, the governor may, by his further order in writing, certified under his official seal, require the district attorney, the sheriff, and the other officers of every such county to take all necessary measures to execute and to obey the order of the governor; and any act of any such county officers in the abatement of any such nuisance, so declared, which shall be reasonable or necessary for the execution of such purpose, shall be lawful and justifiable, and the order of the governor shall be their protection. The expense of the abatement of such nuisance shall be paid by the county in which such nuisance occurs, and such expense shall be a charge or a lien upon the lands maintaining such nuisance, and shall be a valid claim on behalf of said county against all persons maintaining the same, or assisting in the maintenance thereof; and the lien and claim thus created may be collected by action to recover against either or all of the persons liable to pay the same, and may also be enforced by action to enforce the lien upon the lands maintaining the nuisance, by a sale thereof, to satisfy the same.

---

*As amended by chapter **308**, Session Laws of 1882.

When local Boards to be represented at deliberations of State Boards.

§ 9. At any time at the request of the State Board of Health, or whenever the governor shall, as hereinbefore provided, have directed an examination and report to be made by the State Board of Health into any alleged nuisance, any Board of Health of any city of the State may appoint and select any one of its officers as its representative, during such examination of any nuisance, and such representive officer shall have a seat at, and be entitled to take part in, all the deliberations of the State Board of Health, during such investigation, but without the right to vote.

Board may employ experts and examine structures and places.

§ 10. Said Board may, from time to time, engage suitable persons to render sanitary service, and to make or supervise practical and scientific investigations and examinations requiring expert skill, and to prepare plans and report relative thereto. And it is hereby made the duty of all officers and agents having the control, charge or custody of any public structure, work, ground or erection, or of any plan, description, outlines, drawings or chart thereof, or relating thereto, made, kept or controlled under any public authority, to permit and facilitate the examination and inspection, and the making of copies of the same by any officer or person by said Board authorized; and the members of said Board, and such other officer or person as may at any time be by said Board authorized, may, without fee or hindrance, enter, examine and survey all grounds, erections, vehicles, structures, apartments, buildings and places. But no more than five thousand dollars in any one year shall be expended for such special sanitary service.

Limitation of amount to be expended for expert service.

Time of annual report.

§ 11. It shall be the duty of said Board, on or before the first Monday of December in each year, to make a report in writing to the governor of the State, upon the vital statistics and the sanitary condition and prospects of the State; and such report shall set forth the action of said Board and of its officers and agents, and the names thereof, for the past year, and may contain other useful information, and shall suggest any further legislative action or precautions deemed proper for the better protection of life and health. And the annual report of said Board shall also contain a detailed statement of the comptroller of all money paid out by or on account of said Board, and a detailed statement of the manner of its expenditures, during the year last past, but its total expenditures shall not exceed the sum of fifteen thousand dollars in any one year.

Appropriation for expenses.

§ 12. The sum of fifteen thousand dollars is hereby appropriated from the general fund for the purposes of this act, and the expenditures properly incurred by authority of said Board and verified by affidavit, subject, however, to the limitations hereinbefore imposed, and shall be paid by the treasurer upon the warrant of the comptroller.

§ 13. This act shall take effect immediately.

[No. 25.]

State Board of Health of New York.

THE AMENDED PUBLIC HEALTH LAWS. POWERS AND DUTIES OF LOCAL BOARDS.

To Local Boards of Health and Health Officers:

The State Board of Health herewith presents copies of the Health Laws, as consolidated and amended in chapters **351**, of 1882, and **431** of 1881. The powers and duties of all local sanitary authorities are clearly defined, and the relations of the local boards to the State Board of Health, and to the registry of vital statistics, established. The recent amendments have touched only those points which are essential, and which the best legal advisers have shown to be necessary.

The eight general statutes and amendments are now so consolidated under chapter **431** of 1881, and chapter **351** of the Laws of 1882, relating to local health government, as to constitute one connected and harmonious law, as appended to this circular and marked [25 *a*]. This law provides for:

(1.) The organization and constant maintenance of a local board of health in every town, city, and incorporated village.

(2.) Trustworthy and responsible membership of the board, the filling of vacancies, and for a continuous service by each board.

(3.) It requires the board to define the powers, and fix the compensation of a competent health officer.

(4.) It gives to the board ample authority over the preventable causes of contagious and infectious diseases.

(5.) It requires the board to make regulations against nuisances and other causes of danger to the public health.

(6.) It authorizes the board, by an appointed officer or other person to enter upon any premises or place, to make necessary sanitary examinations (and for no other purpose).

(7.) Each board of health is required —

(a.) To receive and examine into the nature of complaints concerning causes of danger and injury to the public health.

(b.) To report to the State Board of Health facts concerning infectious and epidemic diseases.

(c.) To take charge of, and provide for, the quarantine of cases of contagion and its sources.

(d.) To provide for the care of destitute and dangerously infectious persons.

(e.) To report every case of small-pox, and to provide the means for thorough and safe vaccination of those who may need it.

(f.) To supervise the registration of deaths, diseases and causes of death; to examine all certificates and records of death, and returns of coroners.

(g.) To designate persons who shall grant permits for burial.

(h.) To supervise and make complete the registration of deaths, births and marriages.

(i.) To publish necessary regulations and orders of "general obligation."

(j.) To make and enforce any special order without such publication, to meet an emergency not provided for by regulations of "general obligation."

(k.) To compel compliance with, and if need be to execute, their orders; and in such procedures to issue warrants to constables, and if necessary, to the sheriff, to bring to the board's aid the power of the county. Such warrants to have the same force as if issued out of any court of record.

(l.) To employ any necessary aid to enforce the execution of the orders and regulations published and made; to impose penalties for non-compliance therewith, and to obtain judgment and fix liens for the payment of work executed by the board.

(8.) The law also provides that the State Board of Health shall notify local boards to meet for reasons given, and to take action against causes of danger to the public health; also to give notice of any neglect in the registration of deaths, births and marriages, and the burial of the dead; and in case of continued neglect to enforce the registration laws, after three months' notice, to take control of said registration wherever it so continues to be neglected by the local authorities, until they shall agree to and actually make the said records and registry complete as required by law.

(9.) Any refusal or willful neglect on the part of any person to comply with the laws and regulations for such registration is declared to be a misdemeanor, punishable in any court of competent jurisdiction; and the State Board of Health may appear as the complainant in the prosecution of such a misdemeanor when by the fault or refusal of any local board or officer.

Peculiar Nature of the Statutes relating to Health and Registration.—These laws were at first generally "*permissive*," and carefully designed to enable each town, and other civil division for local government, to guard the interests of health and life. They are now strictly *obligatory*, and must be complied with, though penalties may be enforced and the neglected work be executed at the cost of the delinquents only as the last resort. The necessary information, official advice and means are now offered, and, after suitable notification, the laws must henceforth be faithfully complied with and impartially enforced.

To secure general compliance with these laws it is necessary that all local sanitary and registering officers, as well as the State Board of Health, shall continue to give notice to all classes of people concerning these duties, and the rules and regulations for the same; the prescribed methods, forms and times for specified duties under the laws; the penalties for neglect or refusal to comply with said laws and regulations; and concerning reasons and beneficent results of thorough compliance. In no other branch of local government and the general administration of obligatory laws is there such occasion for instruction and explanation as in this of the safe-guarding and registry of the lives of the people.

Sanitary Responsibility.—The local boards and the State Board of Health are officially responsible for the administration of these laws, while the health officers, physicians, clergymen, magistrates, householders and parents, owners and occupants of premises, and all persons having responsibility in the management of any business or property which affects public health, are subject to these obligatory statutes, and any willful neglect or violation of the regulations and orders, made in accordance therewith, is by the laws required to be treated as a misdemeanor.

The Duties of Local Boards of Health may be enumerated as follows:

To guard the community and every family against infectious and epidemic diseases, and wholly to prevent the spreading of small-pox.

To provide for the regular isolation or domestic quarantine of any acute, contagious disease which occurs in the community, and to extinguish the contagion.

To discover and remove preventable causes of disease, especially those that are localized, such as those of filth and malaria. To this end, to place on duty a most competent physician, as Health Officer, and maintain an efficient system of sanitary inspection, reports, notifications and orders.

To supervise and make complete the records and registry of deaths, diseases and burials, and of births and marriages.

To keep the inhabitants well-informed concerning preventable causes of sickness and mortality, and to provide timely information of the necessary means for protecting life and health.

PROTECT and **SAVE** are watchwords of the Health Officer, and the fact should be everywhere understood that public health is public wealth, and that it is essential to the happiness and virtues of the people.

Respectfully submitted on behalf of the Board.

ELISHA HARRIS, *Secretary.*

[**No. 25.**] a.

STATE BOARD OF HEALTH OF NEW YORK.

ORGANIZATION, POWERS AND DUTIES OF LOCAL BOARDS OF HEALTH.

The State Board of Health invites the attention of Local Boards of Health in Towns, Villages and Cities to this recently amended statute, defining the powers and duties of Local Sanitary Officers.

AN ACT for the Preservation of the Public Health.

[**The amendment in 1881, chapter 431, Session Laws, is here printed in** *italics.* **The words in black letters have been added by the amendments made in chapter 351 — of 1882.** The other portion, in common type, comprises what remains of the original act of 1850.]

§ 1. It shall be the duty of the common council of every city *in this state, except in the cities of Brooklyn, New York, Yonkers and Buffalo, which are hereby excepted from the operation of this act, to appoint a board of* health for such city to consist of six persons who are not members of said *council, and who shall be appointed as follows: Two persons for a term of one year; two persons for a term of two years; and two persons for a term of three years; (one of whom, at least, shall be a competent physician). The mayor of such city shall be a member ex-officio of such board of health, and shall be president thereof. The said board of health, when duly organized, shall appoint a competent physician (not a member of such board) who shall be health officer for such city. This section shall not be construed to remove any of the existing boards of health in any of the cities of this state, but the successors of such boards shall be appointed as in this section provided. Upon the expiration of the term of office of any member of the board of health, appointed as herein provided, his successor shall be appointed by such common council for the term of three years, and the said common council shall also have power to fill any vacancy caused in such board of health by the death, resignation or removal from the city of any member thereof. And it shall be the duty of the trustees of every incorporated village in this state in which there is not now a board of health duly organized, to appoint once in each year a board of health for such village, to consist of not less than three nor more than seven persons (who are not village trustees), who shall hold office for one year, or until their successors shall have been appointed, from which board shall be elected a president and secretary; and the said board of health thus constituted shall appoint a competent physician to be the health officer of such village, who shall not be a member of said board of health.*

Constitution of City Boards of Health.

Health Boards of Villages.

§ 2. The supervisor and justices of the peace and the town clerk, *or a majority of them, of each town in this state, together with a citizen of such town, of full age to be elected by them, shall be the board of health for such town for each year, and they shall appoint some competent physician not a member of said board, to be the health officer for such town. They shall have cognizance of the causes of injury or danger to the public health, and shall meet upon call of the supervisor. Also, whenever in the judgment of the state board of health, or (if the said board be not in session), of the president and secretary thereof, it shall be necessary, and the public good requires it, the supervisor of such town upon reasonable notice being given him from the state board of health, or its president and secretary, shall immediately convene the town board of health, by notice to the members thereof, to take such proceedings as the public health in that vicinity may require, and concerning which it shall have been notified by the state board of health, or by its president and secretary. And in any case in which the term for which the board of health of any village or city heretofore appointed shall have expired, or in any case in which a member or several members of a board of health of any town, village or city in this state, shall resign or cease to act officially, so that less than the statutory number of members of said board continue to be members thereof, then it shall be the duty of the county judge of the county in which such town, village or city is situated, or of an adjacent county upon being satisfied that such term has expired or that such vacancy or vacancies exist, to appoint in writing a competent citizen or citizens, as the case shall require to fill such vacancy or vacancies, and to perform the duties of said office within the time specified, and until the said town, village or municipal government shall have elected*

Membership and organization of Town Boards of Health.

Temporary vacancies how filled.

or appointed the member or members, who shall, according to law, perform such official duties in the said board of health. The written appointment to a board of health, made by a county judge under this section shall forthwith be filed in the office of the clerk of the county in which said board of health is located. Any violation of the provisions of this section or of any lawful instruction of said state board of health shall be a misdemeanor.

§ 3. The several boards of health now organized in any city, village or town in this state (*except in the cities of New York and Brooklyn*), and the *several boards of health constituted under this act as amended, shall have power and it shall be their duty:*

(1.) To meet in their respective cities, villages and towns and fix and determine the period of quarantine to which vessels, vehicles or persons arriving in such city, village or town shall be subject; but the said board shall have power, after an examination, to reduce the period of quarantine of such vessel, vehicles or persons, if they deem it safe to do so.

Prescribed duties of health officer.

(2.) To prescribe the duties and powers of the **local** health officer; to direct him from time to time in the performance thereof, and to fix the compensation he shall receive.

Powers to regulate quarantine, etc.

(3.) To make orders and regulations in their discretion concerning the place and mode of quarantine, the examination and purification of vessels, boats and other craft not under quarantine; the treatment of vessels, articles or persons thereof; the regulation of intercourse with infected places; the apprehension, separation and treatment of emigrants and other persons who shall have been exposed to any infectious or contagious disease; the suppression and removal of nuisances, and all such other orders and regulations as they shall think necessary and proper for the preservation of the public health; **also to enter upon or within any place or premises where conditions dangerous to the public health are known or believed to exist and by appointed members or persons to inspect and examine the same, for the protection of life and health, and for no other purpose, and all owners, agents and occupants shall permit such sanitary examinations; and it shall be the duty of said board of health to furnish said owners or occupants a written statement of results or conclusions of such examinations.**

Local board may enter, examine and report upon any premises.

To regulate isolation of and intercourse with infected persons and places.

(4.) To regulate and prohibit or prevent all communication or intercourse with all houses, tenements and places, and the persons occupying the same, in which there shall be any person who shall have been exposed to any infectious or contagious disease.

(5.) *Such board of health shall have power, and it shall be its duty, to receive and examine into the nature of complaints made by any of the inhabitants, concerning causes of danger, or injury to the public health within the limits of its jurisdiction; also to report to the state board of health, promptly, facts which relate to infectious and epidemic diseases within said jurisdiction, and to require such isolation and quarantining of persons, vessels and sources of infection, as shall be in its judgment necessary; also to release from such isolation or quarantine, such persons, vessels and things, as it shall deem safe so to release; but upon ordering such quarantining or isolation, or such release from the same, said board and its health officers shall make a record of the facts in the case, and of the reasons for the action taken. It shall also be the duty of the said local board* to procure suitable places for the reception of persons, *and things infected with* malignant, contagious or infectious diseases, and in all cases where sick persons cannot otherwise be provided for, to procure for them medical, and other attendance and necessaries; *and it shall be the duty of every such board of health to take cognizance of, and report, every case of small-pox or varioloid, occurring within said board's jurisdiction, also to make all needful provisions for immediately obtaining the necessary means for thorough and safe vaccination of all persons within the said jurisdiction who may need the same. It shall also be the duty of the board of health in each town, village and city in this state, to have the supervision of the registration of deaths, diseases and the causes of death, and by its appointed officers, to examine all certificates and records of death, and findings of coroner's juries, and to designate the persons who shall grant permits for the burial of the dead, and to prescribe sanitary regulations for*

Board to make a report of facts, and a record of its orders and acts.

To provide public vaccination.

The Board, supervision and duty of registration of vital statistics.

such burials; **and there shall be no burial of any dead person until a certificate of the death and its causes, if known, shall have been made and presented as required by the laws of this state, and until thereupon a permit for burial shall have been given as provided by said laws;** *and it shall be the duty of every such board of health to supervise and make complete the registration of births, deaths and marriages within the limits of its jurisdiction, and in so completing the said registration the cost thereof shall be a charge upon such town, village or city, and shall not exceed fifty cents for each completely verified and registered record of a birth, death or marriage, but the town clerks and the registering clerks provided by law in villages and cities may still keep all records of births, deaths and marriages as required by chapter five hundred and twelve, laws of eighteen hundred and eighty;* **and in any place in this state in which the state board of health ascertains that said registration is not completely and well made, said state board shall notify the local board of health and the registering clerk, whose duty it is to make the registration in such place, that within three months from the date of such notice, said defects and neglect in the records must be amended and prevented. If at the expiration of the time mentioned said neglect and defects are not overcome and prevented by said local authorities, it shall be the duty of the state board of health to take such control of, and adopt such means for causing compliance with rules and regulations for the said records, as will secure their completeness and proper registration within the limit of cost hereinbefore specified, and until the said local officers shall agree to and actually make the said records and registry complete as required by law; any refusal or willful neglect on the part of any person whose duty it is to make out or file for registration any record or records as aforesaid, and any officer or board that shall neglect or refuse to register and preserve said records as required by law, shall be deemed guilty of a misdemeanor, and may be prosecuted in any court of competent jurisdiction.**

The cost per record not to exceed fifty cents.

State board shall take control to remedy neglects and enforce compliance for a time.

(6.) To publish from time to time all such orders and regulations of general obligation as they shall have made, in such mannner as to secure early and full publicity thereto; and to make, without publication thereof, such orders and regulations in special or individual cases, not of general application, as they may see fit, concerning the suppression and removal of nuisances, and concerning all other matters in their judgment detrimental to the public health, and to serve copies thereof upon any occupant or occupants of any premises whereon any such nuisances or other matters aforesaid shall exist, or by posting the same in some conspicuous place on such premises.

Orders and regulations to be published.

(7.) To issue warrants to any constable of their respective cities, villages or towns, to apprehend and remove such persons as cannot otherwise be subjected to the orders and regulations by them adopted; and, whenever it shall be necessary to do so, to issue their warrant to the sheriff of their respective counties to bring to their aid the power of the county; all which warrants shall be forthwith executed by the officers to whom they shall be directed, who shall possess the like powers and be subject to the like duties in the execution thereof, as if the same had been duly issued out of any court of record in this state.

Power to issue warrants.

(8.) To employ all such persons as shall be necessary to enable them to carry into effect the orders or regulations they shall have adopted, published and made, and the powers vested in them by this act, and to fix their compensation.

Employment of agents.

(9.*) To impose penalties for the violation of, or non-compliance with, their orders and regulations, and to maintain actions in any court of **competent jurisdiction** to collect such penalties, not exceeding one hundred dollars in any one case, or to restrain by injunction such violations, or otherwise to enforce such orders and regulations.

Boards of Health may impose and enforce penalties or restrain violations by injunctions.

---

* Added by § 1, chapter 559, Laws of 1870.

Violating orders of Board a misdemeanor; penalty.

Power to enter upon premises and suppress nuisance.

Unsatisfied judgment to be a lien upon the premises.

Sale of premises at auction.

Certificate of sale.

§ 4.* Every person who shall willfully violate or refuse to obey any order or regulation so made and published, or any order so made and served, or posted as aforesaid, shall be deemed guilty of a misdemeanor, and on conviction thereof, shall be subject to fine or imprisonment, or both, in the discretion of the court, such fine not to exceed one thousand dollars nor such imprisonment **six months.** And in any case of non-compliance with any order or regulation which shall have been so served or posted, as provided in subdivision six of section three of said act as hereby amended, the said board or its servants or employees may lawfully enter upon any premises to which such order or regulation relates, and suppress or remove the nuisance or other matters in the judgment of said board detrimental to the public health mentioned in such order or regulation, and any other nuisance or matter of the description aforesaid found there existing; and the expense thereof shall be a charge upon the occupant or any or all the occupants of said premises, and may be sued for and recovered with costs by said board in the name of such board in any court having jurisdiction. Whenever execution upon any judgment so obtained shall have been returned wholly or in part unsatisfied, said judgment, for the amount so unsatisfied, shall be a lien upon said premises, having preference over all other liens or incumbrances whatsoever. But in order to acquire such lien, such judgment, if in a court not of record, shall first have been docketed in the same place and manner as by law now required to make judgments in such courts liens upon real estate. And whenever any lien upon any premises shall have become fixed as aforesaid, the said board may cause the said premises to be sold at public auction, for a term of time, for the payment and satisfaction of such lien, and the expenses of such sale, giving notice of such sale for twelve weeks successively, once in each week, in one or more newspapers, published in the city, incorporated village or town where the premises are situated, as the case may be; or if no newspaper be published in such village or town, then in the newspaper published nearest said premises, and also serving a copy of such notice of sale personally on the owner or agent of said premises, if known, and a resident of said city, village or town, at least fourteen days previous to such sale, or by depositing the same in the post-office, directed to such owner or agent at his place of residence, if known, or the nearest post-office thereto, at least twenty-eight days previous to such sale. And the said premises shall be sold to the person who shall offer to take the same for the shortest time, paying the amount remaining unpaid upon such judgment, with interest, and the expenses of such notice and sale. A certificate of such sale, signed by the president and countersigned by the secretary of such board shall thereupon be made and delivered to the purchaser, and may be recorded in like manner and with like effect as deeds of conveyance of lands, and thereupon the purchaser, his heirs or assigns, shall be entitled to the possession of said premises so sold as aforesaid, and if unoccupied may immediately enter, and if occupied may have remedy against any occupant by action or by summary proceedings, as against a tenant holding over after expiration of his term; and in case the costs of such action or proceeding shall not be collected by such purchaser of the defendant therein, the same shall be a lien upon said premises, having the like preference as the lien aforesaid, and the term of the said purchaser shall be extended during a time bearing the same proportion to the original term as the amount of such cost bears to the amount paid by such purchaser on such sale. And such term shall commence when such purchaser shall have acquired possession. At any time after such sale, and within six months after the recording of such certificate as aforesaid, the owner or any lienor or incumbrancer of such premises, or of any part thereof, may redeem by paying to the purchaser the amount paid by him on such sale, and all costs and expenses he may have incurred in any action or proceeding as aforesaid to obtain possession, with ten per cent interest thereon. If such redemption be made by the owner, the right of the purchaser shall be extinguished; and if such lienor or incumbrancer, the amount paid by him to redeem shall be added to his lien or incumbrance, or if he have more than one, to the oldest, and shall thenceforth partake of the nature thereof and be collectible by any remedy adapted thereto.

---

* As amended by chapter 790, Laws of 1867. Only when the regulation has been made and published can conviction be had for its violation. Reed v. People, 1 Park, Cr. R. p. 481.

§ 5.* All expenses incurred by the several boards of health **under their official orders or regulations, or under requirements of the statutes,** in the execution and performance of the duties imposed by this act shall be a charge only on their respective cities, villages and towns; and shall be audited levied, collected and paid in the same manner as other city, village and town charges are audited, levied, collected and paid.

Expenses of Boards of Health to be a town, village or city charge; how audited and paid.

§ 6. Whenever any **pestilential,** or infectious or contagious disease shall exist in any county poor-house in this State, or in the vicinity of any such county poor-house, and the physician of such county poor-house shall certify that such pestilence or disease is likely to endanger the health of the persons supported at such poor-house, the superintendent of such county poor-house shall have power to cause the person supported at such poor-house, or any of them, to be removed to such other suitable place in the same county as shall be designated by the board of health of the city, town or village within which such poor-house shall be, there to be maintained and provided for at the expense of the county, with all necessary medical care and attendance, until they shall be safely returned to the county poor-house from which they were taken, or otherwise discharged.

Persons sick of infectious disease may be removed from county poor-house.

§ 7. *In any instance in which there is a legally organized board of health in an incorporated village, which comprises parts of several towns, or less than a whole town, such board of health shall have full authority in regard to all matters relating to public health within said village, and such village which has its own organized board of health shall not be subject to the sanitary regulations or health officers of the township or towns within which such village is located; nor shall the taxable property of any such village, while maintaining its own board of health be subject to taxation for maintaining any town board or boards of health, or for any expenditures authorized by such town boards; but such expenditures of the town boards of health shall be assessed and collected exclusively on property in the town outside of said village.*

Village Boards and Villages not to be taxed to support town sanitary improvements, nor towns to support Village Boards of Health and their works.

§ 8. All acts and parts of acts inconsistent with this act are hereby repealed.

OTHER STATUTES RELATING TO PUBLIC HEALTH.

Protection against Small-Pox.—Vaccination of School Children.—Chapter **438** of the Laws of 1860, is an *obligatory* law providing for the vaccination of all attendants at the public schools. An abstract and explanation of it are given in No. **41** of the printed Papers of this Board.

Prevention of Adulteration of Food and Drugs.—Chapter **407** of 1881, forbids adulteration of Foods and Drugs. The State Board of Health is required to conduct analytical investigations, and give practical effect to this statute.

Safety-Testing and fixed Standards to prevent dangerous use of Explosive Illuminating Oils.—By Chapter **292** of the Laws of 1882 the use of Petroleum products which give off an explosive vapor at a temperature below 100° Fahr., as tested by methods and instruments approved and directed by the State Board of Health, is prohibited. The State Board is charged with the administration of this statute.

Adulteration and Deception in regard to Milk as sold to Customers.—By Chapters **544** of 1864, **220** of 1878, and **407** of 1881, every kind and mode of adulteration and deception in Milk is prohibited. Local boards of heath, as well as persons aggrieved or cognizant, may bring action in court to secure infliction of penalties.

To provide for Public Drainage of Swamps and Wet Lands for Protection of the Public Health.—Chapters **888** of 1869, **303** of 1871, and **243** of 1873, provide ways and means for securing public drainage wherever public health and a Commission judicially appointed demand such general drainage works.

The organic Act creating the State Board of Health and defining the powers of the Governor and the Board.— Chapters **322** of 1880 and **308** of 1882.

---

*As amended by chapter 761, Laws of 1868, and chapter 351 of 1882.

[No. 10, Revised.]

State Board of Health of New York.

Ready references to the Health Laws published by direction of the State Board of Health of New York.

The purposes and duties of this Board, as defined in chapter 322, Laws of 1880, relate wholly to the interests of life and health among the people.

Co-operation between local and State officers, and the exchange of information and reports for the promotion of sanitary welfare, are provided for by sections 6, 7, 8 and 9 of the said law. The State Board does not supersede, but incites prompt and systematic operation of, the local authorities. The State system of Registration of Vital Statistics is supervised and made uniform by the State Board, but every town and school district has its full responsibility in the Local Registry.

Supervisors of the respective Counties are responsible for expenses and local regulations pertaining to the Registry of Vital Statistics. (Chapt. 152 of 1847, and 522 of 1880.) The State Board of Health is required to *prepare* the forms and methods, to obtain and preserve such records and to insure their faithful registration. (Sect. 7, chapt. 322 of 1880; *Local Boards of Health are now in full authority* and must supervise and provide; sect. 3, chapt. 431 of 1881; subdiv. 5, sect. 3, chapt. 351 of 1882.)

Town Clerks are local recorders or Registrars, and Clerks of school districts are the assistants both of the local recorders and the State Board. (Chapt. 512 of 1880, and chapt. 152 of 1847.) The registration of each certificate being made immediately after the event which the law requires recorded, all further clerical work is saved by forwarding the recorded papers to the State Board, monthly. The Board, by its committee and the Superintendent of Registration, has supplied, and will continue to supply, the information and directions necessary to this service.

Reports and records of prevalent diseases are required by law (chapt. 322, sects. 6 and 7) from Local Boards and officers of Health, to the State Board. This duty implies a supervision of records of mortality as now ordered in subdiv. 5, sect. 3, chapt. 351 of 1882. Such supervision will aid in securing the correct registry of deaths.

The formal Permit for Burial is required, and the laws (chapt. 512 of 1880, and subdiv. 5, sect. 3, chapt. 351 of 1882) provide that a Certificate of Death and its causes shall be offered and shall be everywhere possible before the Burial Permit is given. The Transit Permit is designed to secure the transit through different counties or States by public carriers without interruption or cost to public carriers.

Local Boards of Health are organized in accordance with chapters 431 of 1881, and 351 of 1882, or under statutes relating to villages and cities. Town Boards of Health consist of supervisor and justices, without legislative powers, but with the duty to make and enforce sanitary regulations under existing laws, and to appoint a competent medical officer. City and village Health Boards have more varied powers. The State Board co-operates with and can aid all, and this Board urges that the local Boards be maintained in a fully organized condition, even in healthful towns and villages. The Town Clerk and an elected citizen are added to Town Board by chapter 431 of 1881. (See chapters 322 of 1880, 431 of 1881, and 351 of 1882.)

Epidemic and Preventable Diseases occur in all parts of the State, and are to be promptly reported to and investigated by the State Board. Health officers of towns and villages, and the local Boards of Health are chiefly responsible for such reports and information; while the State Board gives information, counsel and skilled investigation for the benefit of all. The local and central authorities are thus co-ordinated. (*See sections* 6, 7, 8, 9 *and* 10; *chapter* 322 of 1880, *and section* 3; *chapter* 351 of 1882.)

Specific laws to promote sanitary welfare.— The statutes concerning vaccination as the safeguard against small-pox; nuisances and matters detrimental to public health; the encouragement of public supplies of pure water; the drainage of swamps and other wet lands; the protection of pure milk-supplies, together with other matters relating directly to the protection of health and life are printed in Papers which this Board furnishes to local Boards. Other and better laws may be devised. The State Board will counsel with and assist local sanitary authorities and the proper committees to procure needed improvements in the laws and their administration, agreeably to *sections* 7, 8 and 11, *chapter* 322 *of* 1880; *chapter* 407 *of* 1881, *and chapters* 292, 308 *and* 351 *of* 1882. Under chapters 291 and 490, Laws of 1883, various new duties have been added.

Sanitary investigations by the State Board are ever in progress as a branch of its duty to the people, and as the law provides that they and their local authorities, the Governor of the State, as well as this Board itself may require such investigations to be made in the interests of health and life (*sections* 6, 7, 8, 9 *and* 10), authority has been conferred to invite local co-operation and employ skilled assistance. Health officers, physicians, the clerks and professional persons concerned in registration, and enlightened citizens throughout the State are requested to co-operate with and seek the co-operation of this Board. A copy of every sanitary report, regulation, rule and ordinance published in this State is requested. The favor will be reciprocated. The offices of the Board are in rooms 11 and 12 at the Capitol at Albany, and the Board's investigations of alleged nuisances are open to the attendance and deliberations of representatives of health authorities of all cities in the State (sec. 9, chap. 322 of 1880), to promote sanitary knowledge and improvements.

MODES AND EXAMPLES ON SANITARY PROCEDURE, ETC.

At the annual meeting in May, 1881, and subsequently, the Secretary was directed to prepare a circular of information upon the best methods of procedure by local sanitary authorities, under the amended laws, against nuisances and other sources of damages to public health. The Board having directed that suitable and most economical plans for contagious disease refuges should be prepared as an appendix to such circular, and that the whole be issued to all local Boards of Health and also be printed in the Second Annual Report, that document is here presented

E. H., *Secretary.*

[No. 27.]

STATE BOARD OF HEALTH OF NEW YORK.

DUTIES AND PROCEDURES OF LOCAL BOARDS OF HEALTH AND THEIR OFFICERS.—EXAMPLES, METHODS AND SUGGESTIONS.

The laws require the Health Boards to "have cognizance of the causes of injury or danger to the public health." Full power is given every Board to make and enforce regulations and orders of *general obligation*, which shall be published and obeyed as laws; also to make *special orders*, without publication, to be immediately enforced for the suppression of nuisances and of sources of contagious diseases or other great dangers to life and health. In this circular the State Board of Health presents a practical view of sanitary procedures, as they relate to nuisances, the protection of health in schools, the removal of causes of malaria, and the control of contagious diseases. In this service, every local Board of Health is required

To be organized according to the statutes.

To have "a competent physician as Health Officer."

To adopt and publish regulations and orders of general obligation.

To prescribe "the duties and powers of the local Health Officer."

To give information to all inhabitants concerning their duties in regard to the registry of deaths, births and marriages, the burial of the dead, and the sanitary care of contagious diseases, and to designate the persons who shall grant permits for the burial of the dead.

To notify all physicians, clergymen and magistrates of their duty relating to certified records for registration.

To make and preserve accurate records of all official proceedings, and to require the Health Officer to do so in his service.

To cause every case of small-pox to be reported immediately to the local Health Officer, and to require him to report to the State Board of Health the fresh outbreaks of that contagion the day he verifies the cases; also to report to the State Board monthly.

All citizens should be free to enter complaints, and the Board should supply a form and a book for recording such complaints.

PROCEDURES AGAINST NUISANCES.

Under the Board's instructions its Health Officer, or other qualified person, must inspect, examine evidence, and make his report to the Board, as the preliminary step to his formal complaint or an official order. Notification, official advice, and a summary or informal order may be usefully given without delay. The formal complaint and order must state that the offense is in violation of a regulation or order of the Board, or that it is "dangerous to life and detrimental to health;" or, being on or near a route of public travel, is noisome or detrimental to public health." Such specific complaints and orders will chiefly relate to scavenging and removal of filth-nuisances, disinfecting, etc., draining, and removal and prevention of obstructions; also cleansing and filling, grading, ventilating, lighting or regulating tenements and places of assemblage, the prevention of noxious emanations, etc.; the isolation and control of dangerous contagions, and the necessary interference with any other causes of imminent peril to life and health.

ILLUSTRATIVE CASES IN PRACTICE.*

The Board of Health in the town of V——, at its stated meeting June 25, having already adopted and published the first *eleven* sanitary Regulations as advised by the State Board of Health [*Paper* No. 26], took action as follows :—

For the removal of marshy and malarial borders of a mill-pond, seven acres in extent, in the village of M——. Upon complaint of the Health Officer and on personal inspection by the Board,

"*Resolved*,—That the Secretary serve the following notice upon Messrs. B. and A, as part owners, and on Messrs. A. B. and E. B. as part owners and lessees :— That they are hereby ordered to remove and drain the marshy borders of the mill-pond hereby declared to be a nuisance,— situated on their respective lands and under their control, on or before the 20th day of July, 1881."

For the Abatement of an Old Slaughter-House Nuisance, and for the Cleansing and Disinfection of the Building.— Upon complaint of the Health Officer, and after inspection by the Board on the 19th of June,

"*Resolved*,— That the Secretary of this Board serve the following notice upon H. S——, the owner :—

"That she is hereby ordered to remove and burn all boards, timbers and other things which are saturated with animal matter in and about the building known and used as a slaughter-house on the western border of the mill-pond marsh, on C—— street, and that the building be thoroughly fumigated, cleansed and disinfected, on or before the 20th of July, 1881."

---

*The examples here given have occurred during the past twelve months. The forms of procedure are such as will be found most convenient and effectual in daily sanitary service.

To Remove a Cause of Pollution of a Running Stream used for Domestic Purposes.

"*Resolved,*— That the following notice be served by the Secretary on C—— S——: That he is hereby ordered forthwith to remove or burn the dead horse which he has buried near a running stream at ——."

Complaint by Citizens, and summary Orders from the Board of Health, served by Health Officer, under the published regulations. Report of service and compliance :

COMPLAINT —

"*To the Board of Health, village* (or town) *of* ————— :

"Take notice that there is, upon the premises owned by J—— K——, and occupied by Mrs. ——, at No. —, —— street, an overflowing privy-vault ; and that I hereby complain of the same as a nuisance."

"Dated ———, N. Y., this 7th day of May, 1882." "C. H., *Complainant.*"

Upon this Complaint the Health Officer indorses, and returns to the Board —

CONCERNING NUISANCE AT ——

"*To the Board of Health of* .... :

"I certify that on the 7th day of May, 1882, I received the within complaint, and that on the 7th of May I examined the premises and requested the owner to remove the contents of privy-vault. This he did *partially;* — the nuisance remaining. June 7th he was served with *notice to abate* within 3 days. June 10th it was found abated.

"(Signed) —— ——,
"(Dated) ——. *Health Officer.*"

COPY OF ORDER TO ABATE.

"*To Mr. J—— K——:*

"You are hereby required within 3 days to abate a nuisance upon your premises on ——, in —— village, viz., an overflowing privy-vault and a cesspool in front of said premises, or the same will be done, and the expense thereof collected from you, together with the penalty of neglect in relation thereto.

"By order of the Board of Health.

"—— ——,
Health Officer."

NOTE.— This order was served on owner and the tenants at the same time. It was fully complied with by J. K., the owner.

Summary Order for Abatement of Nuisance of Stagnant Water, and an old Cistern, by the Board of Health of the town of ——:

"*To* ——————————, owner and occupant of premises on the corner of I—— and W—— streets :

"You are hereby notified that the stagnant water upon your premises and bordering upon the public streets here mentioned, and an old cistern there situated, have been declared a nuisance by this Board, dangerous to life and detrimental to health. You are hereby required to abate said nuisance, within three days from the date hereof, by filling up said cistern, removing all rubbish and obstructions to drainage, and by keeping the said premises so drained, as to be free from all surface-water."

Local Sanitary Officers Obstructed.—Outbreak of Diphtheria in a Summer Resort of Families.—Notices by telegraph and mail were received by the State Board of Health announcing an outbreak of diphtheria, stating that the owner refused to comply with the sanitary requirements of the local Board of Health, and requesting inspection and advice by the State Board.

Inspection and Report by Commissioner and a Sanitary Engineer of the State Board of Health:—"Found four large buildings occupied by 300 inmates, mostly in families. It is a family resort and summer hotel. Six cases of diphtheria had occurred,—one suddenly fatal.

"*Drainage and Sewerage.*—Conducted from all directions in the basement under the largest building to a central receiving vault, which is an untrapped cesspool immediately under the center of said building. Numerous water-closets, urinals, ice-boxes, provision-chambers and pantries drain into this cesspool. The slop-sinks are untrapped; the basement floors and joists are rotten and the decayed flooring of many of the basement rooms has been torn up and laid in piles. Accumulated filth, cart-loads of rotten floorings and mud about the water-closets of the basement, endanger the inmates of the buildings. None of the closets, slop-sinks, etc., are stench-trapped. Stenches everywhere.

Ventilation.—The bath-rooms, water-closets, slop-closets and privies in each of the buildings have no ventilation excepting through the apartments in which situated. The basement and cellars are chiefly ventilated directly upward through the rarefied atmosphere of the several buildings and their corridors and promenades."

Action by the Local Board of Health.—Based upon the details of the inspection, minutely recorded, the village Board of Health immediately convened and unanimously issued its sanitary orders covering eleven specifications of work to be forthwith executed, by the owner of the property.

Remark.—In this instance the State Board provided the expert inspection upon which the orders were made and carried into execution. The first order was in the following terms: "To empty, cleanse and disinfect the great cesspool or receiving vault in the basement at the head of the main sewer and the pipes discharging into it; to remove all obstruction from the house sewers, and ventilate the receiving vault by a shaft six inches in diameter, which shall be carried above the highest point in the roof; to have flag-stones over said cesspool or vault laid air-tight in cement."

This instance illustrates the way in which a local Board of Health may appeal to the State Board. Local Boards, under the amended law, have the right to enter and examine, for sanitary purposes only, any place or premises. (See subdiv. 3 of § 3, chapter 351, 1882.)

Case of a Badly Ventilated School-house—its Cesspools returning their Gases into it.—The physicians in the town of C—— have for years quoted the enormous rate of sickness and mortality of the pupils in Public School No. 4, as evidence of unhygienic conditions that should be officially abated and prevented in and about said school-house. The local Board of Health inspected the premises, and early in December, 1881, with the aid and specifications of a sanitary engineer, instructed the school officers to close several class-rooms forthwith, and make certain changes and repairs specified in the engineer's report. Those specifications were, * * * that,—

(a.) No provision whatever exists for ventilation of the basement and first story of the building; and, with only a single exception, the same is true of second story.

(b.) The heating apparatus derives its air supply from the basement room that is occupied as a janitor's dormitory.

(c.) The three water-closets in the basement discharge into a horizontal pipe that passes under the cellar floor, onward to the cesspools in the yard. There are hopper-closets in the yard, all unventilated and in foul condition. * * *

It is required that changes and improvements be made as follows:

(1.) *Ventilation — first story* —A board six inches wide, to be fitted close to lower sash of windows, so that sash may be raised sufficiently to admit a copious supply of fresh air between top panes of the lower and the bottom panes of upper sash, without draft across the heads of pupils. Let the windows of second story be treated in like manner; also from ceiling of centre of each room of this story conduct a galvanized iron cylinder or air-shaft, for exit of foul air, through and to a height of two feet or more above the roof. Place regulating registers at lower end of these air-shafts, flush with ceiling. Cover tops above roof with cowls.

(2.) Basement and its quarters for janitor to be vacated, and kept ventilated through-and-through.

(3.) The air-supply channels to take pure air from above, and none from basement.

(4.) Remove water-closets, and substitute suitable ones with adequate means of flushing and constant cleansing [specifications submitted]. Every closet in the house to be ventilated by shaft from trap, separately, to above the roof [specifications given]. The filthy hopper-closets in the yard to be superseded by suitable substitutes [specified].

Action by Board of Health and School Trustees — The Trustees suspended the school in those class-rooms which the Board of Health condemned, and made the improvements as specified. On the 2d of February the Board reported that the work was well executed, and the class-rooms all fit to be re-occupied. After four months the teachers and sanitary officers report that, though overcrowded, no sickness or deaths have occurred. Trustees report that further improvements will be made during summer vacation.

PROCEDURES BEFORE THE COURTS.

The public Health act, chapter 351 of 1882, provides for three classes of cases, and suitable methods of procedure, before any court of competent jurisdiction.[*]

First. Under subdivision 7, section 3 of the act, the Board may issue warrants to any constable or sheriff, which shall have the force as if issued out of a court of record, and which shall forthwith be executed by said officers, for the purpose of instantly controlling causes of great danger to public health, and to apprehend and remove persons who cannot otherwise be subjected to the sanitary orders and regulations.

---

[*] The courts of competent jurisdiction for merely enforcing the Board's orders without waiting indictment and conviction for misdemeanor are: (1) The Board itself, for determining the facts concerning failures or refusal to obey sanitary regulations or orders, when a fine not exceeding $100 may be imposed by the Board; (2) a police justice or any justice of the peace; and. (3), any court of criminal jurisdiction for violation of laws against harm to life and health. Boards of Health may ascertain what is most expedient in law procedures by consulting the District Attorney or other competent counselor-at-law. Concerning these points the Attorney-General has stated that the remedies for violations of the health laws, and of the orders and regulations of local Boards of Health, are threefold:

Second. To impose penalties directly for violations of, or non-compliance with, sanitary orders and regulations, and to maintain actions in any court of competent jurisdiction, and collect such penalties, not exceeding one hundred dollars in any one case. Also to sue for and collect the costs that have been incurred by the Board or a contractor under the Board in the execution of its order, whatever the sum may be.

Third. To bring offenders before the courts upon charges of misdemeanor, for violation of, or non-compliance with, sanitary regulations and orders, to be prosecuted and punished as provided by section 4 of the general Health act.

In all these procedures by a Board of Health, the law has fixed the nature of the offense in such manner that conviction thereof *may* be had without a formal indictment; yet in all cases of accusation of misdemeanor (as under section 4) the accused person has the right to a trial by jury, if he so elects; otherwise, *conviction* and *penalties* may be determined by any court of competent jurisdiction as respects the particular case or class of cases. All costs incurred by the Board in necessary execution of sanitary orders may be collected as provided in sections 3 and 4 of the Health act.

SANITARY CONTROL OF INFECTIOUS AND CONTAGIOUS DISEASES; THEIR ISOLATION OR QUARANTINE.

Diseases propagated by contagion, also those caused by local conditions which should be controlled, removed and prevented, produce a large proportion of the sickness and mortality in the State.

Small-pox, diphtheria, scarlatina, typhoid fever and many other diseases are spread from house to house, and from place to place by infection. Dysentery and the diarrhœal diseases generally, malarial fevers and some other maladies are produced by local causes, which require definite action for their removal and prevention. The drainage, cleansing, drying, ventilation, etc., which are necessary to prevent disease, require sanitary inspection and suitable sanitary work.

The diseases which spread by personal infection, have to be controlled and "stamped out," by definite restraint upon the intercourse and exposure of individuals, by **separation or quarantine** of the sick

---

(1) Criminal proceeding. Willful violation or refusal to obey any order or regulation duly made, is, by section 4 (ch. 351, Laws 1882), and by section 397 Penal Code, made a misdemeanor, punishable by fine or imprisonment or both. Generally speaking, courts of Oyer and Terminer, and courts of sessions in counties have cognizance of these offenses; so also have certain local criminal courts in cities. The method of procedure in both the courts of Oyer and Terminer, and in the courts of sessions is by indictment.

(2) Civil proceedings for the recovery of the expenses incurred by the Board in summarily abating nuisances under section 4, chap. 351 of Laws 1882.

(3) Civil proceeding for the collection of penalties imposed under the authority of subdivision 9 of section 3.

The two latter proceedings are cognizable by civil courts having jurisdiction of the persons who are parties, and power to render judgment for the amounts demanded. Justices of the peace can give judgment to the amount of $200. County courts and the supreme court, likewise have jurisdiction, but recovery must be had to the amount of $50 to carry costs, recovery of a less amount subjecting the plaintiffs to the payment of the defendant's costs.

All of these remedies are concurrent, and can be resorted to in succession where either one proves ineffectual.

In addition to these remedies under the statutes for the enforcement of Health laws and regulations, there are also the old remedies, civil and criminal, for the abatement of nuisances, at the common law.

and of all infected things and places, and by thorough cleansing and disinfection of whatever is infected or has been exposed to contagion. Whatever is necessary in such procedures may be best illustrated by examples in practice, as here shown.

CASES AND SANITARY PROCEDURES IN PRACTICE:

Every case of small-pox, diphtheria, scarlatina, typhus or typhoid fever or other infectious malady, being,— by sanitary regulations,— in every town, city and village, *reported to the local Board of Health as soon as known*, the action taken by the physician, the family and the health officer should be,—

(1.) To separate the patient or patients, from all persons liable to take the disease.

(2.) To provide such perfect sanitary care for the sick and such prompt and complete disinfection for the apartments, clothing and other things that require disinfection, that disease shall not spread from them.

Duty of physician, householder and family.—Small-pox, diphtheria, scarlatina, typhus or typhoid fever being discovered and certified to exist in any house, the physician in attendance and the householder, or family where the disease appears, is required to give notice to the health officer, or if there is no health officer, then to the nearest member of the Board of Health, stating the name, age and circumstances of the sick person or persons. The medical attendant should at once separate the sick from all others than those who have the care of the cases, and should also carefully instruct the family concerning duties to themselves and to the sick.

Duty of Health Officer and Board of Health.— Be prepared to give specific directions, both verbally and by the printed card, showing precisely what to do, what to avoid, especially in regard to the apartments and persons where the sick are, the care and disinfection of all things that can communicate the disease, and also in regard to the rules concerning improper intercourse with and movements of the sick and whatever can convey the disease; also sanitary purification required at the termination of the case. The official card for this purpose should be placed in the hands of those in charge. The medical attendant is responsible for the duty of faithfully enforcing such rules and regulations as long as the sick and the family are under his professional care.

The sanitary authorities should direct the methods and extent of disinfection, but it is usually best to do this by the help of medical attendants, in no case, however, permitting these duties to be omitted. The official notice to the households and their medical attendants should state these rules and duties plainly and briefly. The following is a suitable form for such notice to the family or their physician or otherwise:

A——B—— being sick with [small-pox] must be kept entirely separate from all persons except the appointed attendants, and no others can be allowed to remain upon the same floor of the house. unless they have had small-pox, or been successfully vaccinated within a few years The directions given in Nos. 15, 16 and 41 of the State Board of Health papers should be faithfully followed.

The attendants, as well as the sick themselves, should be kept entirely away from all persons who are not already protected against the contagion. The attending physician, and the undersigned, will give any information desired in each case, and the official release from sanitary restrictions will be given in writing as soon as it safely can be.

By order of the Board of Health,
(Signed) ——————
Health Officer of ————

Quarantine and other Sanitary Orders against Contagious Disease.—Though it is presumed that the health officer and the Board of Health will, with rare exceptions, have the confidence and concurrence of the people, so that sanitary orders and instructions will be promptly complied with, the law provides suitable means for enforcing any necessary order of the local Board of Health.

An order for the isolation or quarantine of any source of dangerous contagion is absolute in its nature, and must be promptly obeyed; and under sections three and four of the Public Health Act, as amended in 1867, 1881 and 1882, it is provided that "*Every person who shall willfully violate or refuse to obey any order or regulation, . . . so made and served shall be deemed guilty of a misdemeanor,*" and by issuing its warrants to the constable, the Board may "*apprehend and remove such persons as cannot otherwise be subjected to the orders and regulations by them adopted.*" In the execution of such orders the officers are required "*forthwith to execute them, as if the same had been duly issued out of any court of record.*"

Small-pox, diphtheria, typhus, typhoid and scarlet fevers and cholera may occur under circumstances that require such prompt action. The State Board has issued special sanitary papers, Nos. 13, 14, 15, 16, 38 and 41, to aid health officers and families in their duty concerning these diseases.

Records of deaths and prevalent diseases.—The laws require these records to be returned to each local Board, as well as to the State Board of Health, by the health officer. Card No. 30 has been prepared for this purpose, and is supplied by the State Board. Cards 31 and 52 are for use by the medical attendants upon small-pox and diphtheria, and are supplied by this Board to physicians through the local Board.

Temporary Quarantine,—Refuge and Hospital.—There are four ways of quickly providing a suitable refuge and hospital for contagious disease.

(1.) At home, upon the upper floor, or in any completely secluded part of the house — cleared of all occupants, except the sick and attendants.
(2.) A separate little building suitable for a Hospital Ward ready for use.
(3.) A Board Hut or a Pavilion, hastily constructed for the purpose; or
(4.) a Hospital Tent and Fly canopy. These are the safest kinds of Contagious Disease Refuge during the warm season.

The *first* is the common expedient. It is best that the entire floor, or that a separate quarter or end of the dwelling be set apart for the domestic quarantine of the sick.

The *second* is occasionally the most available and suitable method. Such a separate building should be in a healthful spot, and thoroughly ventilated.

The *third* is frequently the best method of quickly and effectually providing for any increasing number of patients. The annexed plan and specifications for a Contagious Disease Refuge and Hut, is designed to show what may be constructed in a single day to meet an emergency, such as frequently occurs in villages, alms-houses and asylums. The Hospital Tent is the best kind of refuge in the warm season, if the tent-canvas and materials are at hand. The annexed plans and directions for the Tent-Hospital will be readily understood.

These methods need no further explanation in this circular ; yet as regards any method of isolation, removal, and the quarantining of contagious diseases, *we must be careful to do the sick no harm* while the people are being incited to the duty of removing and preventing the causes of disease.

The objects of this circular will be attained if health officers and Boards of Health find their duties made clear and their work facilitated by it.*

Prepared and submitted by order of the State Board of Health.

ELISHA HARRIS, *Secretary.*

---

* See the plans here proposed, on pages 265–268, in Chapter on Repressing Contagious Diseases.

[No. 53.]

PLAN OF ORGANIZATION OF A LOCAL BOARD OF HEALTH OF THE TOWN OF ....

As Adopted.....................188 .

The following citizens constitute the present Town Board of Health:

NAME. RESIDENCE.

.... Supervisor, ...
.... Town Clerk, ...
.... Justice of Peace, ...
.... Justice of Peace, ...
.... Justice of Peace, ...
.... Justice of Peace, ...
.... Justice of Peace, ...
.... Citizen (appointed),.....................
Dr.................. Health Officer, ...

The Health Officer, together with the following named Gentlemen, are authorized to grant Burial Permits, in accordance with the laws.

....
....
....

A Transit Burial Permit (for any burial beyond County limits) may be given by the Health Officer, and

....
....

The Board has ordered the following regulations to be printed and distributed for the information of every family in town. *Please preserve for future reference.*

By chapter 431 of the Session Laws of the State of New York, as enacted in 1881 and amended in 1882 (chapter 351), the Supervisor and Justices of the Peace and the Town Clerk, or a majority of them of each town in this State, together with a citizen of such town of full age to be elected by them, shall be the Board of Health for such town for each year, and they shall appoint some competent physician, not a member of said Board, to be the Health Officer for such town.

They shall have cognizance of the causes of injury or danger to the public health, and shall meet upon call of the Supervisor. The duties of the local Board of Health may be enumerated as follows:

(*a.*) To receive and examine into the nature of complaints concerning causes of danger and injury to the public health.

(*b*) To report to the State Board of Health facts concerning infectious and epidemic diseases.

(*c.*) To take charge of, and provide for, the quarantine of cases of contagion and its sources.

(*d.*) To provide for the care of destitute and dangerously infectious persons.

(*e.*) To report every case of small-pox, and to provide the means for thorough and safe vaccination of those who may need it.

(*f.*) To supervise the registration of deaths, diseases and causes of death; to examine all certificates and records of death, and returns of coroners.

(*g.*) To designate persons who shall grant permits for burial.

(*h.*) To supervise and make complete the registration of deaths, births and marriages.

(*i.*) To publish necessary regulations and orders of "general obligation."

(*j.*) To make and enforce any "special order" without such publication, to meet an emergency not provided for by regulations of "general obligation."

(*k.*) To compel compliance with, and, if need be, to execute their orders; and in such procedures to issue warrants to constables, and, if necessary, to the sheriff, to bring to the Board's aid the power of the county. Such warrants to have the same force as if issued out of any court of record.

(*l.*) To employ any necessary aid to enforce the execution of the orders and regulations published and made; to impose penalties for non-compliance therewith, and to obtain judgment and fix liens for the payment of work executed by the Board.

The following regulations will be enforced by the local Board, namely:

Deaths and Burials. — The householder where death occurs, and whoever shall undertake to bury the dead, shall present to the Health Officer (or to the nearest member) of the Board of Health, a certificate of the death, as the law provides, and shall, as soon as practicable, receive from such officer the required permit, so that there may be no needless delay in the burial. A certificate of the death should be filed, and a burial permit be issued, at least twelve hours before the appointed hour for burial. The Health Officer and any Justice of the Peace are each authorized to issue burial permits, and to furnish blanks for certificates.

Birth-Records. — The physician, or whoever attends professionally at a birth, is required to make out the certificate and forward it to the registering officer; if there is no attendant, then one of the parents, or the head of the house where the birth occurs, shall make out and attest the certificate, and forward it to the registering officer within three days after the birth. The "given" or "fore"-name should be certified as soon as given. The Town Clerk and Health Officer will supply cards and instructions for making such returns.

MARRIAGE-RECORD. — The person who legally attests the marriage ceremonial must certify his official act in the prescribed form, after which it is his duty to make sure that the record and certificate are placed in the hands of the registering officer within three days after the marriage.

☞ The registration of births, deaths and marriages, the examination of certificates and the granting of burial permits shall be without charge to the families to whom they relate.

Rules to be observed in the public registration of Deaths, Births and Marriages, and in the regulation of Burials. [From the published instructions of the State Board of Health.]

THE CERTIFICATE OF DEATH. — Immediately after a death it is required that the householder, or some other person present and best acquainted with the record of the deceased, shall fill out, or cause to be written, all that is needed to be inserted in the blank spaces of the first ten lines of the death certificate. The certificate, so written, must be presented to the medical attendant, or in case there has been no medical attendant, must be taken directly to the nearest officer of the Board of Health, or to a Justice of the Peace, who will cause the proper medical certificate of the cause of death to be completed in the blank spaces on and under the eleventh line of the certificate. This duty should be attended to within twenty-four hours after death, and the certificate, thus completed, must be presented to one of the permit officers of the Board of Health, or to the Town Clerk, for the burial permit. Such certificate of death should be presented, and the burial permit issued, at least twelve hours before the appointed time for the funeral or removal of the corpse.

THE BURIAL PERMIT. — This permit must go with the corpse to the place of burial. It is to be retained by the keeper of the cemetery until called for by the Board of Health.

THE TRANSIT BURIAL PERMIT. —When the corpse is to be removed beyond the county in which the death occurs, the transit permit, which has two coupons, perforated for removal as required, will be used in accordance with the rules printed on the permit. This will secure the uninterrupted and unquestioned right of transportation of such corpse to the place of burial, wherever that may be.

A rule to be observed in the burial of those who die of Acute Contagious Diseases. — No public funeral, no opening of the coffin, and no transportation (unless in a sealed metallic or lead-lined coffin) by public carriers beyond the nearest appropriate burial place, should be permitted in the case of those who die of diphtheria, scarlet fever, measles or typhus. The corpse should be wrapped in strong disinfectants until buried.

THE DEAD BORN:—*Still-births.* — An infant born dead must be certified as a still-birth, and will be buried as any other corpse, and must have a burial permit. The certificate of a *still-birth* will be kept in the local registering office, but will not be recorded with other deaths, nor with births. You will report monthly, in your regular returns to the State Board, the number of still-births.

MARRIAGE-RECORDS should, in all cases, be written out by the bride and groom and be ready for the attesting signatures of witnesses and the person who solemnizes the ceremonial. Though the statutes require the clergyman, or other person who professionally certifies the facts and ceremonial, to cause such record and certificate to be delivered to the registering officer, the Laws of 1880 and 1882 require the State sanitary authorities to prepare the forms and methods for making the records and registry of marriage, birth and death complete throughout the State. The couple who enter upon matrimony must furnish their required personal records and be prepared to offer the proper witnesses and signatures at the time of the ceremonial.

Orders and regulations (of general obligation) adopted by the Board of Health for the town of.............., county of................., State of New York.

First. Whatever is dangerous to human life, and whatever renders the air, or food and water, or drink unwholesome, are declared to be nuisances, and to be unlawful.

§ 2. No privy-vault, cess-pool or reservoir into which a privy, water-closet, stable or sink is drained, except it be water-tight, shall be established or permitted within fifty feet of any well, spring or other source of water used for drinking or culinary purposes. And every privy-vault and cess-pool shall be cleaned, and the contents thereof removed, at least once before the first of May in each year.

§ 3. No house offal, dead animals or refuse of any kind shall be thrown upon the street or left exposed by any person; and all putrid and decaying animal or vegetable matter must be removed from all cellars and out-buildings at least once in each year and on or before May first in each year.

§ 4. No meat, fish, birds, fowls, fruit, vegetables, milk, and nothing for human food, not being then healthy, fresh, sound, wholesome, fit and safe for such use, nor any animal or fish that died by disease or accident, and no carcass of any calf, pig or lamb, which, at the time of its death, was less than four weeks' old, and no meat therefrom shall be brought within the limits of this town, or offered or held for sale as food anywhere in said town.

§ 5. Any householder in whose dwelling there shall occur a case of scarlet fever, diphtheria or small-pox shall immediately notify the Board of Health of the same; and until instructions are received from the said Board, shall not permit any clothing or other property that may have been exposed to infection to be removed from the house. Nor shall any occupant change his residence elsewhere without the consent of the said Board during the prevalence of any public danger from said disease; and all physicians and other attendants upon any person sick with small-pox, typhoid or scarlet fever, diphtheria or other disease dangerous to the public health shall forthwith report the same to the Board of Health. And it shall be the duty of such physicians and attendants to avoid exposure to the public of any garments or clothing about their own persons that may have been infected from exposure to any diseases. Nor shall any of the excretions of the body from a person infected with typhoid be thrown in a privy vault, but the same shall be buried in the ground at least one hundred feet from any dwelling or well.

§ 6. There shall not be a public or church funeral of any person who has died of small-pox, diphtheria, scarlet fever, and the family of the deceased is required to limit the attendance to as few as possible, and to prevent the presence, so far as they are able, of those who have not had the disease of which the deceased person died; and it shall be the duty of householders and all persons concerned, where a death occurs from any contagious or pestilential disease, to prevent needless assembling in the apartments and house, where such diseases are, of all persons liable to become infected thereby.

Any local Board of Health can enforce compliance, and inflict a penalty not exceeding a hundred dollars ($100) for non-compliance with, or the violation of its lawful regulations and orders.

These regulations shall go into effect immediately.

................................*President.*

................................*Secretary.*

................................*Health Officer.*

Dated at..............................

..................................188 ,

[No. 54.]

STATE BOARD OF HEALTH OF NEW YORK.

To the Health Officer of...

This Board respectfully urges that the duty required under section 3 of the amended Act for the Preservation of Public Health shall be strictly complied with in all respects.

As the Health Officer is usually the executive as well as medical officer of the Board, his duties and powers should be prescribed (under subdivision 2, section 3 of the amended act) by the local Board. He should especially be instructed and authorized by the Board to perform the various duties defined under subdivisions 3, 4 and 5, so far as a medical officer can best perform them; and he should have special supervision of, and give constant advice relating to, the Certificates of Death and the Permits for Burial.

The local Board of Health, by its Health Officer, should communicate to the State Board of Health whatever information it can concerning the occurrence of the **acute Contagious Diseases.** Whenever a case of **Small-pox** occurs, the Health Officer should at once require and obtain a correct report of the same, and instantly give the necessary instruction and official orders. He should report the case, and also the place where it occurs, to the State Board of Health, by telegraph or the first mail (see subdivision 5, section 3 of the Health Act, and page 4 of circular 38). Diphtheria and Scarlet Fever should be reported under local orders of your Board, directly to you, by the householders, as well as physicians who have charge of the patients. The State Board wishes your reports upon such occurrences when you have investigated them, also whenever this Board can give you any aid and counsel. Circulars Nos. 13, 14, 15 and 16, with the record-cards 31 and 32, are supplied freely to Health Officers and other physicians.

THE MONTHLY RETURNS OF RECORDS of mortality and the prevalent diseases are required by the State Board of Health upon the form [No. 30] now furnished to you. This Board will supply any number of the same cards, and any other blanks for use of physicians who practice within the limits of your Board's jurisdiction, so that they may make a return to you every month. A one cent stamp attached to the card when filled out, passes it through the mail. The general duties and procedures of a local Board and its Health Officer are defined and illustrated in document No. **27**, now sent to you.

The various laws under which public health duties and works are provided for, in this State, you will find printed in the Second Annual Report, pages 417–425, 492, 497–499.

REPORTS FROM LOCAL HEALTH OFFICERS AND BOARDS.— In addition to the immediate report of **Small-pox**, and the Health Officer's monthly report of mortality and prevalent diseases, it is desired that Diphtheria, whenever it begins to spread, shall have its first cases reported in accordance with the form [No. **32**]. Also, that physicians shall report to you all their cases in similar form. You will please cause a quarterly and a yearly report to be made to the State Board of Health upon the printed forms which will be sent to you ; also send to this Board a copy of all regulations and orders of general obligation adopted by your Board, together with printed instructions which you officially issue. The State Board makes such exchanges with all local Boards, as required by law. (See pages 418, 419 land 423 of Second Annual Report.)

STATISTICAL AND OTHER SYSTEMATIC REPORTS.— The record-card [No. **30**] for monthly returns, and a tabulated quarto sheet, **55**, for a Quarterly Statement, now supplied by this Board, will enable you to make the returns desired by the undersigned, and required by the laws. The Registry Clerks make their returns monthly, as required by circulars **36** and **36**c, **49** and **50**, here inclosed for your information. The facts given in these papers should be understood by all physicians, ministers and families. In No. **53** is presented an example of the effective organization, regulations and orders of general obligation by a Town Board of Health. Lawful procedures and methods of Health Authorities are described in No. **27**, to which is appended a memorandum on Contagious Disease Refuges and Temporary Hospitals.

Respectfully,

EDWARD M. MOORE,
President.

ELISHA HARRIS, *Secretary.*

OFFICE OF THE STATE BOARD OF HEALTH,
ALBANY, *January* 1, 1883.

[No. 36.]

OFFICE OF STATE BOARD OF HEALTH OF NEW YORK.

ALBANY, *May* 10, 1882.

To Boards of Health and Local Registering Officers:

RULES TO BE OBSERVED IN THE PUBLIC REGISTRATION OF DEATHS, BIRTHS, AND MARRIAGES, AND IN THE REGULATION OF BURIALS.

THE CERTIFICATE OF DEATH.— Immediately after a death it is required that the householder, or some other person present and best acquainted with the record of the deceased, shall fill out, or cause to be written, all that is needed to be inserted in the blank spaces of the first **10** lines of the death certificate. The certificate, so written, must be presented to the medical attendant, or, in case there has been no medical attendant, must be taken directly to the nearest officer of the Board of Health, or to a Justice of the Peace, who will cause the proper **medical certificate** of the cause of death to be completed in the blank spaces on and under the **11th** line of the certificate. This duty should be attended to **within 24 hours after death**, and the certificate, thus completed, must be presented to the Permit officer of the Board of Health, or to the Town Clerk, for the Burial Permit. Such certificate of death must be presented, and the Burial Permit issued, at least twelve hours before the appointed time for the funeral or removal of the corpse.

THE BURIAL PERMIT.—This Permit must go with the corpse to the place of burial. It is to be retained by the Keeper of the Cemetery until called for by the Board of Health.

The TRANSIT BURIAL PERMIT.— When the corpse is to be removed beyond the county in which the death occurs, the **Transit Permit,** which has two coupons, perforated for removal as required, will be used in accordance with the rules printed on the Permit. This will secure the uninterrupted and unquestioned right of transportation of such corpse to the place of burial, wherever that may be.

A rule to be observed in the Burial of those who die of Acute Contagious Diseases.— No public funeral, no opening of the coffin, and no transportation (unless in a sealed metallic or lead-lined coffin) by public carriers beyond the nearest appropriate burial place, should be permitted in the case of those who die of diphtheria, scarlet fever, measles or typhus. The corpse should be wrapped in strong disinfectants until buried.

THE DEAD BORN : — *Still-Births.*— An infant born dead must be certified as a still-birth, and will be buried as any other corpse, and must have a Burial Permit. The certificate of a *still-birth* will be kept in the local registering office, but will not be recorded with other deaths, nor with births. You will report monthly, in your regular returns to the State Board, the number of Still-Births.

☞ **Careful attention to these duties relating to the immediate procuring of Certificates of Death and the issue, thereupon, of the Burial Permit, will prevent any delays and inconvenience in the removal and burial of the dead.**

BIRTH CERTIFICATES AND THE BIRTH REGISTER.— The physician, or whoever attends professionally at a birth, is required to make out the certificate and forward it to the local registering officer. If there is no professional attendant, then one of the parents, or the head of the house where the birth occurs, should make out and attest the certificate, and forward it to the registering officer, as soon as practicable, or within three days, at the latest, after the birth. The "Given" or "Fore" name should be certified and registered as soon as given, and it can be sent, by the local registrar, to the State Board of Vital Statistics, at any time within six months. The Town Clerk and Health Officer will supply the card and instructions for making such return of the delayed name of the infant.

MARRIAGE RECORDS.— On the day of a marriage, and while the proper witnesses are present with the married couple, the record should be made out and signed by them according to the forms required by the State. *The person who legally solemnizes or attests the marriage ceremonial must certify his official act*, in the prescribed form, after which it is his duty to make sure that the record and certificate are placed in the hands of the local registering officer within three days after the marriage.

N. B.— The public registration must be made in the place (Town, Village or City) in which the event — to be recorded — occurs.

RECORDS OF PREVALENT DISEASES.

The laws require that every local Board of Health shall report to the State Board every case of small-pox and varioloid, and the facts relating to epidemic, infectious and prevalent diseases; and it is made the duty of each local Board to receive, and examine into, the complaints made by any inhabitant concerning causes of danger or injury to the public health. Each local Board has power to take whatever action is necessary to prevent the spread of dangerous diseases, and the laws require that the State Board of Health shall give any necessary information and advice in such duties.

REPORTS TO THE STATE BOARD OF HEALTH.

The State Board of Health is required to receive and give attention to reports from the local Boards of Health; and the laws also require that the local Boards shall make reports and give information whenever called upon by the State Board.

Regular monthly returns and reports of all records (certificates of Births, Deaths and Marriages) are required to be made to the State Bureau of Vital Statistics, at the office of the State Board of Health, at Albany, on the 15th of every month, to comprise all the certificates of Birth, Death and Marriage that have been received and registered in or for the preceding calendar month. The State Bureau furnishes suitable blanks and envelopes for this purpose, and each local registrar will have returned to him the full amount of postage or expressage that he has paid. Envelopes, postage, and any publication which the State Board has for the use of local officers, will be sent, on application to the Secretary.

FEES AND OTHER COMPENSATION.

The Board of Supervisors may fix the compensation and may regulate the registration in any county where said Board takes action in accordance with chap. **512**, of 1880; but *the local Board of Health in every city, village and town in the State is charged with the duty of making the registration complete, and providing regulations for the burial of the dead, and designating officers who shall issue the Burial Permits*; and the cost of such service, under direction of the Boards of Health, shall not exceed fifty cents for each record. The average cost thus far is less than fifty cents. Every Board of Health is authorized by chap. **431**, of 1881, to assume the entire direction of registration and the regulation of burials, etc.; and where the county has not already enacted a local law to provide for the service by a general charge upon the county, this new law makes it a general charge upon the Town, Village or City whose Board takes these duties in hand.

☞ **The blank certificates should be distributed in stitched packets to every physician, clergyman, magistrate and midwife, according to their respective professional duties.** Using the State Board's stereotype plates, fresh supplies of them, stitched in packages to suit, can be obtained at the bare cost of printing and paper, at any time and in any quantity required.

Blanks on a durable kind of paper for Transcripts of individual records from any one of the three Registers, are furnished to any persons who require them.

The Index Book, to accompany the Registers, are prepared by Messrs. C. Van Benthuysen & Sons, and will be forwarded at cost, to the Registering Officers on their application. The Registered records should be completely *Indexed* at the close of the year.

Record-Cards, (22, 30, 31–32), for distribution and use by Health Officers, Physicians and Registrars, will be sent to them on application.

[No. 36.]c

STATE BOARD OF HEALTH OF NEW YORK.

CONCERNING REGISTRATION, VITAL STATISTICS AND CERTIFIED RECORDS.

The board of health in every town, village and city is held responsible, under the laws, for the complete and perfect registry of deaths, births and marriages, and for the records and lawful permits of burials.

The law limits the cost of each registered record to a sum not exceeding fifty cents. The payment of such registration fee is a charge which, when fixed by authority, can neither be diminished nor disputed. The same is true of the necessary cost of the three registers and the blank forms used for certificates and permits, as ordered by the local authorities.

The registry laws have created no new offices. The town clerk, village clerk, city clerk or a health officer or registering clerk whom the local board of health appoints, must keep and register these records as the laws and the local board of health require. (See subdiv. 5, sec. 3, chapt. 351, Laws of 1882.)

The State Board of Health, being informed from month to month concerning the records as registered in each place, is required by law to enforce the registration, and perfect it whenever any local board of health neglects it *after three months' notice* from the State Bureau of Registration and Vital Statistics at Albany. Such a notice will be served upon any board and registering officer whenever the State Board finds it necessary to do so; and after three months from such notice, if the records are not being completely and properly registered, the State Board is required to assume the direction of this duty in each such place, and to cause the laws relating to this matter to be strictly complied with.

Disregard of the duties, or violation of the laws and regulations, relating to the records, or the registry of them, is punishable by a heavy fine that the Board of Health can impose, or by penalties the courts will impose for willful misdemeanor.

Any local board of health can enforce compliance, and inflict a penalty not exceeding a hundred dollars (**$100**) for non-compliance with its published regulations under the statutes.

Each local board of health must adopt and publish all necessary regulations, and will do well to publish a regulation and order, in something like the following terms:

[*For specific instructions upon all questions of duty relating to certificates, records and public registry of deaths, births, marriages, and burials, we refer to circular* **36** *of the State Board of Health.*] *The following regulations will be enforced by this local board, namely:*

DEATHS AND BURIALS.— *The householder where a death occurs, and whoever shall undertake to bury the dead, shall present to the health officer (or to the nearest member) of the board of health a certificate of the death, as the law provides, and shall, as soon as practicable, receive from such officer, the required permit, so that there may be no needless delay in the burial. A certificate of death should be filed, and a burial permit be issued, at least twelve hours before the appointed hour for burial. The health officer and the justices of the peace are each authorized to issue burial permits, and to furnish blanks for certificates.*

BIRTH-RECORDS.— *The physician, or whoever attends professionally at a birth, is required to make out the certificate and forward it to the registering officer; if there is no attendant, then one of the parents, or the head of the house where the birth occurs, shall make out and attest the certificate, and forward it to the registering officer within three days after the birth. The "given" or "fore" name should be certified as soon as given. The town clerk and health officer will supply cards and instructions for making such returns.*

MARRIAGE-RECORD.— *The person who legally attests the marriage ceremonial must certify his official act in the prescribed form, after which it is his duty to make sure that the record and certificate are placed in the hands of the registering officer within three days after the marriage.*

☞ *The registration of births, deaths and marriages, the examination of certificates and the granting of burial permits, shall be without charge to the families to whom they relate.*

The foregoing five paragraphs, in *italics*, should be published among the regulations of every board of health and every registry office.

As the State Board will enforce the law in relation to registration by the local boards, each local board and registering officer should faithfully instruct and induce the people to comply with the regulations for the registration of deaths, births and marriages, and the regulation of burials and lawful transit of remains of the dead.

The records of the three chief epochs of the human life require *permanent registering* as much as any records of real estate, such as deeds, mortgages, etc.; and as it is the law of the State, this law should be enforced.

NOTE.— The registry clerks and health officers will please to keep a correct list of the *persons* and *proofs*, to be called for, concerning delinquencies and violations of the registry laws, as the statutes and regulations relating to this subject must be complied with. Please let the list, etc., show,—

Names and residence of delinquents.—

Date and nature of records wanted.—

Date of registry clerk's official notice to the delinquents.—

Each registry office will transmit a copy of its records of these *delinquency cases* to the State Bureau on the 15th of each month, with the original copies of *registered records* of the previous calendar month.

[No. 49.]

State Board of Health of New York.

HELPS AND RULES FOR COMPLETE AND PERFECT REGISTRATION OF VITAL STATISTICS.

Registry officers, health officers, boards of health and clerks of county boards of supervisors have recently asked for information which is given on this page. Physicians, ministers, school-district officers and other citizens ask of them, as well as of the State Board of Health, information on these subjects, and they will be fully answered in this circular.

As nearly all the towns in the State have organized their local boards of health, and assumed the supervision of registration of deaths, marriages and births, and the recording and regulation of burials, and as the village and city boards of health uniformly supervise this service, the system is sufficiently complete to warrant the following *suggestions and rules* for the guidance of registry clerks and all other persons who have any responsibility for, or supervision of, the records and registration.

Perfect and complete records. — The certificates must be perfect in whatever is entered upon them, and they should be as complete as possible: It is important *that all names be correctly spelled and distinctly written;* that the entire certificate be written in *black ink*, and that the registry officer should verify all that is written by indorsing his *signature* and *title,* with *date,* on the back, as he receives and files the certificates; *that the family or friends who write or give the facts* certified concerning the persons to whom the certificate in any case relates, should correctly *give full names,* also the *maiden name of mother* and the birthplace of parents (if known), and the true residence of the persons *concerning whom the record is being written.*

Either a professional attendant, or an official person (who lawfully may), *must certify* or attest the correctness of every certificate. *School-clerks and mere neighbors cannot do this.* Registry officers will please cause all defects or neglects to be *amended within a week from the discovery of them,* in records received.

Registry officers will indorse the date and their signature on the back of every certificate the day it is received, so that the prompt registry (by dating the return) required by law, shall be complied with, and errors be prevented. Each certificate must then receive on its face, its true register No. [No. . . . .]

The certificates of still-births insure orderly burials and, after such use, they are to be filed away by the registry officer, and must not be entered in the ordinary death registers.

Burial permits must be required before the interment.— Every town, village and neighborhood will be kept supplied with blank Permits — in the hands of officers whom the laws authorize to use them. The local health officer and board of health will regulate this matter.

[No. 50.]

STATE BOARD OF HEALTH OF NEW YORK.

The Family and Persons first Responsible should Write out the Personal and Family Record of each Birth, Marriage or Death; and Immediately Hand the Same to the Professional or other Attestant, to Complete, and to Certify by his Signature.

THE FAMILY and friends have the first interests and public responsibility in regard to the completeness and accuracy of the personal records and the dates which should be registered. Therefore this, which is the greater part of every certificate, should be carefully written out in the house where the recorded event occurs, and should be given to the professional attestant for him to complete and finally certify. The laws require the professional attendant's certificate, and the State Board of Health advises that the family and friends give to him, in writing, all the facts required for the personal and family record.

A BIRTH-RECORD should be written out and made entirely ready for the attesting signature within **36** hours after the event. If there was no professional attendant, the parents, or any responsible witness, should certify the record so written out. If the given name of infant is not decided upon before the certificate is sent to the registry clerk, it must be sent to him on a separate card, as soon as given. Every registry clerk and board of health has the cards for distribution, which the State Bureau has prepared for this purpose. Parents will bear in mind that upon their accuracy, carefulness and punctuality in the making out of the birth-record, and causing it to be certified and brought to the registry office, great interests of the child and family may depend. The parents must see to it that the record is certified and brought to the local registry office within three days after the birth.

MARRIAGE-RECORDS should, in all cases, be written out by the bride and groom and be ready for the attesting signatures of witnesses and the person who solemnizes the ceremonial. Though the statutes require the clergyman, or other person who professionally certifies the facts and ceremonial, to cause such record and certificate to be delivered to the registering officer, the Laws of 1880 and 1882 require the State sanitary authorities to prepare the forms and methods for making the records and registry of marriage, birth and death complete throughout the State. The couple who enter upon matrimony must furnish their required personal records and be prepared to offer the proper witnesses and signatures at the time of the ceremonial; and the official who certifies, should do so immediately after the ceremonial of marriage, and he who so certifies is required by the statute to make sure that his certified record is delivered to the registering officer within three days.

Any corpse which is *brought into* a town, village or city for burial, must be interred in accordance with the *sanitary and burial regulations* of such place, and must be accompanied with a lawful Permit, *or have one granted on the spot.* Such a record of the burial belongs to such place, and the lawful permit must there be filed with the cemetery keeper, and by him or a carrier must be filed in the local registry office at the proper time.

A transit permit for transportation into or beyond the county limits may be issued, upon receiving a suitable certificate of death, in any case where public carriers or other responsible persons ask for such a Permit.

Records of permits and burials should be so kept that the precise *place of burial* can be readily traced in future. Registry officers and cemetery-keepers must see to this.

All local registry officers will make full returns on or about the **15th** of each month, inclosing the *certificates registered in previous calendar month,* together with *given-name cards* as received and registered. *Pack flat,* in full file-form. Packets weighing *less* than **5** *ounces* should be sealed and sent by mail. If weighing *over* **5** *ounces,* they should be sent by express, C. O. D., inclosed in the addressed envelopes.

Every packet will be acknowledged by postal or letter, and the postage and addressed envelopes, due, will be sent *every* **3d** *month* or oftener.

Official transcripts of any record that is registered will be issued from the State Bureau, with seal, without charge, and may be issued by a local registry officer. *New supplies* of any blank forms, registers or index books can be obtained of the printers at their printed rates. Any of the *numbered papers and card-forms, of the State Board,* are sent free.

DEATH-RECORDS must be made complete as possible (upon the first **10** lines, as numbered upon the official certificates of death), by the person or persons best informed concerning the deceased, and having the chief responsibility for the burial. The signature of the person who makes the record to this extent, should be written under the tenth line. The statutes make it a duty of the medical attendant (when there is one), to keep such a record, and to furnish a copy of it, duly certified, to the burial permit officer and the registry clerk, as the lawful voucher upon which a permit for burial shall be granted and the record of every death secured for public registration. The blank forms for death certificates and for burial and transit permits are now generally distributed in every town, village and city in the State. The local boards of health have full control of all that relates to approval of the death certificates, the granting of permits and the regulation of burials. The required record of the deceased, and the report of the death should be made to the medical attendant, for his certification, within **36** *hours after death,* and the certificate should be presented to the burial permit officer at least half a day before the hour appointed for the burial.

EXPLANATORY.— The *professional attendant* is made responsible, under the laws, for securing and certifying the facts which are required for public registration, yet the laws require this duty from him to the State and the people because, in the existing conditions of society, he more certainly than others can make sure of the personal records, and should certify them as one of the lawful conditions upon which the State endowed him with the authority and franchises of his professional position. His professional request for any records which should accompany his certificate, is to be promptly and fully complied with. In the absence of professional attendants the statutes authorize Justices of the Peace, with competent witnesses, to obtain and attest the records. Local boards of health have the right to canvass for and gather up any delayed returns of records for registration; and they may, after their publication of regulations, inflict fines for neglect or refusal to make and send forward the records required for registration.

IMPORTANCE OF THE CERTIFICATES AND THEIR PUBLIC REGISTRATION.— Every family, as well as every physician, minister and magistrate would promptly do all that is necessary to make out and complete the records and registry as the laws require, if the great value of them were as well known as that of the public records of estates and other property. These records of each of the three epochs of human existence and family lineage are of more permanent value than the registry of deeds and mortgages. They are necessary to promote correct sanitary knowledge, and to aid in the protection of great interests of life and social welfare throughout the State.

Respectfully submitted to health officers, registry clerks, professional attendants and families in the State of New York;

THE SANITARY PAPERS RELATING TO THE PREVENTION AND CONTROL OF CONTAGIOUS DISEASES.

The series of papers issued under the above heading for general distribution, have all been printed upon single sheets or leaflets, and as they are in untechnical phrase, and have proved to be of great utility, the Board has directed their republication in this place.

[No. 13.]

State Board of Health of New York.

HINTS FOR PREVENTING DIPHTHERIA.

This brief memorandum of sanitary duties is designed for use of families and communities exposed to diphtheria, and is published by the State Board of Health to aid in the repression and prevention of this terrible disease.

Issued by order of the Board,
Albany, *March*, 1881.

EDWARD M. MOORE, M. D.,
President.
ELISHA HARRIS, M. D.,
Secretary.

Diphtheria is an infectious and dangerous disease, readily communicated by the sick and by clothing from the sick-room. The room itself is apt to retain and communicate the infection. Its spread is prevented by great care to have the sick, their clothing, and the persons who nurse them, kept entirely away from others, especially from children : and to such care should be added cleansing.

The sick must be nursed in a clean and airy room, on a floor where there are no other children.

Every cloth and cup, and all clothing and bedding used in the sick-room, must be cleansed and disinfected before being handled or used by other persons. The house itself must be disinfected as soon as the sick recover or die. Cleanliness and ventilation should be enforced night and day.

The Cleansing and Disinfection.*—Open windows, and open fire-places—with fire in them day and night—protect the sick and all who attend them. The cloths and dishes used by the sick should be put into boiling-hot water, as soon as removed, without being taken to another room. The soiled clothing from the sick and the bed, that can be boiled, should be thrown into a disinfecting fluid, made by dissolving four *table-spoonsful of sulphate of zinc* ("white vitriol"), and two table-spoonsful of common salt in a gallon of boiling water (one-fourth pound of sulphate of zinc to two ounces of table-salt to the gallon). When the time for washing comes, thoroughly boil the clothing, etc., before washing.

The woodwork, chairs and stools of the sick-room should be washed with the disinfecting fluid. The chamber vessels and spit-cups, used by the sick, should be drenched with this fluid before they are removed from the room.

The grounds surrounding the house, the ditches and drains and the privy and chip-yard, must be drenched with the cheap solution of green copperas (sulphate of iron), made by dissolving five pounds of the dry copperas in a large pailful of water.

As soon as the sick-room is vacated let it be fumigated with sulphur, and let all rugs, beds, blankets and other furniture remain in the room and near where the kettles or pans of sulphur are placed. From two to five pounds of sulphur, or broken brimstone, laid upon ashes and coals in iron vessels (set into large tubs that contain a few inches depth of water), will be necessary for fumigating an ordinary chamber. The physician will direct how to do this; but it will be well done if the rooms to be fumigated are so closed that the suffocating fumes do not escape from flues and crevices, and the burning of the sulphur at last ceases for want of fresh air before all the sulphur is consumed. Let the fumes be kept shut in all day. Finally, let all plastered portions of the room be well white-washed with fresh-slacked lime. Let the bottom and sides of cellars be sprinkled thickly, and repeatedly, with quick-lime. All house-drains, ditches, filthy grounds, garbage-tubs, and decaying materials should be cleared out and disinfected, and waste-pipes, drains and sewer connections so improved that no gases from them shall enter the house.

The sick should be nursed by adults who have no children about them. Avoid the patient's breath and matters ejected in coughing.

Children and visitors should keep away from the house where there is diphtheria. The burial of those who die should be strictly private The corpse should be wrapped in a sheet saturated with the zinc disinfectant.

Children who recover from diphtheria should not visit or be visited, attend school or meetings, nor mingle with others of the family from which separated, until the physician permits.

The mother, father or other member of a family, who needs to become the attendant upon the sick when quarantined for diphtheria, should practice all possible precautions to prevent spreading the infection in the family. Nurses of such patients should keep away from other families and from other children of the same family.

---

* See card of Instructions on Disinfection.

Note.—Perfect drainage and cleanliness, thorough ventilation and dryness, and repeated disinfection of all the house drains and foul places are necessary to the safety of the family and the neighborhood.

☞ Ask your physician to notify the local health officer of the occurrence of diphtheria, also to inform the State Board of Health concerning the cases and discovered causes.

It must be remembered that not only the mild cases, but the convalescent, may and frequently do infect others fatally, and that by this means diphtheria is thoughtlessly spread from place to place.

It is a public as well as domestic duty to apply these Sanitary Rules wherever a case of diphtheria occurs. This disease should be treated as an enemy to be conquered in every house it enters.

[No. 14.]

STATE BOARD OF HEALTH OF NEW YORK.

SANITARY RULES FOR PREVENTING SCARLET FEVER.

The State Board of Health of New York directs this Memorandum of Instruction and Rules to be issued for the benefit of families and neighborhoods throughout the State. The card of Instructions on Disinfection accompanies this.

EDWARD M. MOORE, M. D.,
President.
ALBANY, *March*, 1881.
ELISHA HARRIS, M. D.,
Secretary.

Scarlet fever is an infectious and dangerous disease. The mildest case may spread its fatal infection, and cause the most malignant cases.

The danger of communicating this disease continues during convalescence as well as in the height of the fever. Whatever is discharged or comes from the patient is liable to infect persons who have not had scarlet fever. The clothing, furniture and the air of the sick-room may impart the infection. Clothing, bedding, closets and closed rooms may retain the infectious poison for a long time. Strict sanitary rules are urgently required on this account.

Parents, teachers, school officers and all persons who have the care of children can do much to guard against the occurrence of infection, and they frequently are responsible for the spread of scarlet fever. The State Board of Health appeals to all who are thus responsible to do whatever they can to prevent this disease. This is to be attempted by the isolation or quarantine of the sick, and by disinfection, cleansing and ventilation.

ISOLATION AND QUARANTINE OF THE SICK.

The sick with scarlet fever should be placed in an upper room with the best ventilation, and kept secluded from all except those who have charge of the case.

Children in the family not affected must be prevented from mingling with other children, and especially must be kept from schools and meetings. Children of other families in the same house should submit to this rule, yet it is earnestly recommended that uninfected children be sent away from the house in which there is scarlet fever, to families in which there are no persons liable to the disease.

Infected Materials.—Carpets, curtains, trunks, clothing and all stuffed furniture and bedding should be removed from the room, and the part of the house in which the sick, or dead, with scarlet fever are to be placed.

The contagious matter thrown off from the surface of the patient's body is to be controlled as much as possible by such anointing of the body with oil, vaseline or lard as the physician may direct, and especially by disinfecting all discharges as they issue from the patient, and placing all clothing, towels, etc., removed from the sick, immediately in the disinfecting fluid of zinc-salt.

Disinfection.— Apply the methods and means described in the circular on disinfection. Follow the same rules as for diphtheria. The disinfectant made by dissolving one-fourth pound sulphate of zinc and two ounces of salt in a gallon of water is the best and cheapest.

Thorough cleansing and ventilation must be enforced. All drains, sewers and privies about the house should be kept thoroughly disinfected.

Restrictions upon Convalescents.— As the liability to infect others continues as long as there is any desquamation, or peeling of the skin, and possibly even longer, the recently sick should not attend any school, church or company, or ride in a public conveyance while the skin is peeling, the throat and eyes sore, or any symptoms of dropsy are present. A competent physician should decide what special cleansing by warm baths with vaseline-soap or chlorinated washes should be used. In all cases let the physician decide, and certify, in writing, that the patient is safe to others, before any child recently suffering from scarlet fever is permitted to attend school.

Whoever attends upon scarlet fever patients, and whoever enters the room where they are, should not mingle with persons liable to take this fever, without changing all clothing, after thorough ablution of hands and head.

Burial of the dead from scarlet fever should be strictly private, with the corpse wrapped in a sheet saturated with the zinc disinfectant, or inclosed in an air-tight coffin. When a death from this disease is announced in print, the notice should state the cause as "from scarlet fever," to prevent attendance at the funeral or visits to the house.

A destroyer of precious lives, and a most harmful and permanent cause of injury to the bodies of children who survive the attack, scarlet fever must be treated as an enemy of childhood and of the family. We must endeavor to "stamp out" and exterminate the known contagion by which it spreads. Separation, purification, ventilation and disinfection of the sick and all that pertains to them, as well as the rooms and bedding they have occupied, and the special sanitary care of all persons who have been exposed or near to them, are necessary for arresting the spread of this disease. Promptly report all cases of scarlet fever to the nearest health officer, and at once order the isolation and sanitary care of the sick as advised by these rules and the physician.

[No. 15.]

STATE BOARD OF HEALTH OF NEW YORK.

SANITARY PRECAUTIONS FOR PREVENTING THE SPREADING OF INFECTIOUS DISEASES.

The State Board of Health publishes this Memorandum of Sanitary Precautions against the spreading of Contagious and Infectious Poisons, because the most of them can be "stamped out," and all of them can be controlled.

E. M. MOORE, M. D.,
ALBANY, *April*, 1881. *President.*
ELISHA HARRIS, M. D.,
Secretary.

Cleanliness and ventilation are in all cases and everywhere of the first importance. The diseases which are spread chiefly from place to place and from person to person by means of their own infection or contagion are to be regarded and treated as enemies, to be resisted and stamped out. The propagation of some of them with the help of local causes, seen or unseen, and the fatality, as well as spread, of each one of them is increased by personal uncleanliness and local unhealthfulness. Diphtheria, measles, scarlet fever, typhoid fever, puerperal fever and small-pox are the most pestilent of these infectious diseases in this State. But typhoid fever and malignant cholera are infectious by means of excremental matters rather than from bodily emanations. Typhus spreads by its personal contagion, and it originates among crowded and uncleanly people. These diseases and all infections and contagions require disinfection and all sanitary precautions that prevent infection.

Small-pox, scarlet fever, diphtheria or measles.—The patient should be kept in a separate room (preferably on an upper floor) from which, if possible, carpets, curtains, stuffed furniture, clothing and other articles not required for immediate use should be removed beforehand; and no person except the physician, nurse or parent should be allowed to enter the sick-room, or to touch any of the articles used therein, until after thorough disinfection.

To disinfect clothing, etc., in the sick-room.— Keep in the room a tub containing a quarter of a pound of sulphate of zinc and two ounces of salt to a gallon of water. All bed linen, handkerchiefs, etc., used about the patient should be allowed to soak in this solution for at least an hour before removal from the room and afterward be thoroughly boiled, separate from the rest of the family washing. Never send such articles to a public laundry.

To disinfect discharges from the patient.—Use the same disinfecting fluid as in disinfecting clothing, but three times stronger, or use copperas water, made by dissolving a pound and a half of copperas in a gallon of water. The latter answers for all excremental discharges, while the former is best for all articles of clothing and furniture. All vessels used in the sick-room should be disinfected with one or other of these disinfecting fluids, unless immediately immersed in boiling water. Disinfect the discharges and clothing immediately.

Typhoid fever.—The poison lies in the discharges from the bowels, which should be at once disinfected with the solution of the zinc-salt or of copperas. Particular care should be exercised to prevent any possible contamination of sources of drinking water with these discharges. Bed clothing or other articles soiled by the evacuations should be treated with the zinc solution and be boiled.

Dysentery and cholera.—Adopt the same regulations as in typhoid fever.

Typhus fever.—Enforce free ventilation, and disinfection of clothing as above described. Attend to the fumigation of the sick-room and its bedding.

To prevent the body of the patient from spreading contagion.—In the eruptive diseases, especially in scarlet fever, the patient's body should be anointed at least twice a day with oil, lard, or vaseline, containing about ten grains of carbolic acid or of thymol to the ounce. This process should be maintained until all bran-like scaling of the skin is at an end. The zinc-salt solution should be used as directed. Before again associating with unprotected persons, the patient should have several complete ablutions, including thorough washing of the hair with soap or borax; and none of the clothing worn for several days before the disease declared itself should be again used until thoroughly disinfected, and ventilated in the open air several days.

Avoid visiting houses where there are any of these diseases.— Occupants of such houses should not visit.

Disinfection of houses and apartments.—Fumigation with sulphur is the only practicable method for disinfecting the house, as well as furniture, bedding, etc., that cannot be steamed or boiled. For this purpose the rooms to be disinfected must be vacated. Close the rooms as tightly as possible, place the sulphur in iron pans supported upon bricks in wash-tubs containing a little water, set it on fire by hot coals, or with the aid of a spoonful of alcohol, and keep the room tightly closed twenty-four hours. For a room of dimensions equal to ten feet square, or one hundred square feet of floor-space, at least two pounds of sulphur should be used; for larger rooms, proportionally increased quantities.

After fumigation, the freest possible ventilation should be practiced. All woolen clothing, silks, furs, stuffed bed-covers, beds, and other articles which cannot be treated with zinc solution should be hung in the room during fumigation, their surfaces thoroughly exposed, and their pockets turned inside out. Afterward they should be hung in the open air, beaten and shaken. Pillows, beds, stuffed mattresses, upholstered furniture, etc., should be ripped open, the contents spread out and thoroughly fumigated. Carpets are best fumigated on the floor, but should afterward be removed to the open air and thoroughly beaten. Many of such articles may be disinfected in an oven or steam-heated tank, at a temperature of from 212° to 250° Fahr., maintained for five or six hours.

Disinfection of premises, etc.—Cellars, yards, stables, gutters, privies, cess-pools, water-closets, drains, sewers, etc., should be repeatedly and profusely drenched with copperas solution, which is easily kept ready for use, at full strength, by hanging a basket containing about sixty pounds of copperas in a barrel of water, and renewing the supply from time to time.

Corpses should be wrapped in a sheet wet with the strongest disinfecting solution, and buried as soon as practicable.

Warning against typhus.—The typhus contagion, wherever it is found, threatens much harm. The local boards of health should require their health officers to be watchful and ready to adopt all necessary sanitary precautions for isolating and controlling this disease at its first appearance. Tramps should not be permitted to enter dwellings and lodging houses, as they wander about. They should be cleansed and controlled by Superintendents of the Poor. Sanitary officers should order whatever is necessary. Every typhus patient should be so quarantined and provided for as to prevent the spread of infection. All lodging houses and dwellings where fever is suspected should be thoroughly cleansed; and wherever a case of typhus occurs the disinfection of the clothing, bedding and sick rooms should be as prompt and thorough as in cases of small-pox. The sick and whatever pertains to them, as well as the remains of the dead from contagious diseases, must not be removed from one place to another without written permission of all the health boards of the several places.

[No. 16.]

State Board of Health of New York.

INSTRUCTIONS FOR DISINFECTION

[*As Prepared under the Direction of the National Board of Health.—Issued by the State Board of Health of New York.*]

Disinfection is the destruction of the poisons of infectious and contagious diseases.

Deodorizers, or substances which destroy smells, are not necessarily disinfectants, and disinfectants do not necessarily have an odor.

Disinfection cannot compensate for want of cleanliness nor of ventilation.

I. *Disinfectants to be Employed.*

(1.) Roll sulphur (brimstone) for fumigation.
(2.) Sulphate of iron (copperas) dissolved in water in the proportion of one and a half pounds to the gallon: for soil, sewers, etc.
(3.) Sulphate of zinc and common salt, dissolved together in water in the proportion of four ounces sulphate and two ounces salt to the gallon: for clothing, bed-linen, etc.

II. *How to Use Disinfectants.*

(1.) In the sick-room.—The most available agents are fresh air and cleanliness. The clothing, towels, bed-linen, etc., should, on removal from the patient, and before they are taken from the room, be placed in a pail or tub of the zinc solution, boiling-hot if possible.

All discharges should either be received in vessels containing copperas solution, or, when this is impracticable, should be immediately covered with copperas solution. All vessels used about the patient should be cleansed with the same solution.

Unnecessary furniture, especially that which is stuffed, carpets and hangings, should, when possible, be removed from the room at the outset; otherwise, they should remain for subsequent fumigation and treatment.

(2.) Fumigation with sulphur is the only practicable method for disinfecting the house.—For this purpose, the rooms to be disinfected must be vacated. Heavy clothing, blankets, bedding, and other articles which cannot be treated with zinc solution should be opened and exposed during fumigation, as directed below. Close the rooms as tightly as possible, place the sulphur in iron pans supported upon bricks placed in wash-tubs containing a little water, set it on fire by hot coals or with the aid of a spoonful of alcohol, and allow the room to remain closed for twenty-four hours. For a room about ten feet square, at least two pounds of sulphur should be used; for larger rooms, proportionally increased quantities.

(3.) Premises.—Cellars, yards, stables, gutters, privies, cess-pools, water-closets, drains, sewers, etc., should be frequently and liberally treated with copperas solution. The copperas solution is easily prepared by hanging a basket containing about sixty pounds of copperas in a barrel of water.

(4.) Body and bed clothing, etc.—It is *best* to *burn* all articles which have been in contact with persons sick with contagious or infectious diseases. Articles too valuable to be destroyed should be treated as follows:

(*a.*) Cotton, linen, flannels, blankets, etc., should be treated with the boiling-hot zinc solution; introduce piece by piece, secure thorough wetting, and boil for at least half an hour.

(*b*) Heavy woolen clothing, silks, furs, stuffed bed-covers, beds, and other articles which cannot be treated with the zinc solution should be hung in the room during fumigation, their surfaces thoroughly exposed, and pockets turned inside out. Afterward they should be hung in the open air, beaten and shaken. Pillows, beds, stuffed mattresses, upholstered furniture, etc., should be cut open, the contents spread out and thoroughly fumigated. Carpets are best fumigated on the floor, but should afterward be removed to the open air and thoroughly beaten.

(5.) Corpses especially of persons that have died of any infectious or malignant disease, should be thoroughly washed with a zinc solution of double strength; should then be wrapped in a sheet, wet with the zinc solution, and buried at once.

Metallic, metal-lined, or air-tight coffins should be used when possible; certainly when the body is to be transported for any considerable distance.

The chemicals here recommended are simple, safe and effectual; they are cheap and can be obtained in every town, and used in the ways here described, they will destroy contagious and infectious matter, and the directions for fumigation, boiling, ventilation, cleansing and drying can be carried out in any house; but let it be remembered that there are no substitutes for cleanliness and fresh air.

The State Board of Health advises that these Instructions be followed.

[38.]

STATE BOARD OF HEALTH OF NEW YORK.

PREVENTION OF SMALL-POX.

Duties of the Local Authorities — Health Officers and others.

The State Board of Health, at its meeting December 13, 1881, directed that the health officer and Board of Health in every place where there is small-pox, in this State, shall receive from the secretary of the State Board whatever aid this Board can give for controlling the contagion; and it is required of all health authorities and other persons who know of any outbreak or case of small-pox, that they shall report the facts immediately to the secretary of this Board and to the nearest health officer.

Small-pox is liable to appear in any place where there are unvaccinated persons. It is dangerous to life, and is a misfortune which causes loss and great disturbance in the affairs of any community that does not immediately secure to every inhabitant the necessary protection by vaccination and re-vaccination, and by thorough quarantine and disinfection of the contagion.

The laws in this State require:—

(1.) That all who are in attendance at the public schools shall present evidence of their being vaccinated; also that after ten days' notice any person may be excluded from school who is not so protected against small-pox. (Chap. 438, Laws of 1860.)

(2.) That it shall be the duty of all local Boards of Health promptly to report to the State Board of Health every case of small-pox, and to immediately provide thorough and safe vaccination for all persons who need the same, within the jurisdiction of said local Board; also isolate and keep in quarantine, and to regulate, prohibit or prevent communication or intercourse with persons, houses and places that have small-pox.

(3.) That the local Board of Health shall suitably provide places and means for the complete separation and sanitary care of infected persons and things.

Vaccination is a public duty for the protection of the whole community as well as of each individual and family; and it is so necessary to secure its protection in all places and for all classes of people that none have a right to neglect it for themselves, their families, the public schools or the community. The State Board of Health has directed its secretary to give whatever information or advice is needed to secure the most perfect vaccine matter and the speediest and best application of it whenever and wherever it is required.

The State Board advises and requires that the law for vaccination of all who attend schools shall be faithfully observed; and

That every local Board of Health be prepared against small-pox,—

By an agreement with all physicians to secure perfect vaccination in every household where they attend;

By instructions to health officers to ascertain who are un-vaccinated and exposed;

By notifying the State Board of Health at once, when and where small-pox appears, and by telegraphing or writing to this Board what their wants are; and

By requiring prompt compliance with the local Board's orders, and by immediately instructing and aiding the community in regard to the same.

The State Board will co-operate with the local Boards of Health:—

By immediately answering and complying with requests from local authorities;—

By telegraphing and writing to secure the best means of vaccinating;

By sending to local authorities brief suggestions for immediate use in the community;—

By supplying the few forms for records and reports which are required, together with the Board's printed cards of information relating to vaccination, disinfection, and the suppression of the contagion; and

By guaranteeing the payment for limited requisitions, by the local Boards of Health, for fresh and pure vaccinal lymph from heifers, to meet any urgent necessity that cannot be provided for by the local authorities at the moment,— the said authorities then promising payment.

A Word of Suggestion and Warning to All.—Every infant should be vaccinated before it is six months old, unless a good physician advises to the contrary. Every person who has passed the age of twelve years should be re-vaccinated with fresh heifer virus, to test the fact of complete protection against small-pox; and those who have had that disease should be vaccinated, as it may attack a person who was marked by it, as well as a person who has been only once vaccinated. Sufficient vaccination removes all liability to the disease. For this purpose re-vaccination is earnestly advised. Vaccination with lymph from clean and healthy inoculated heifers causes no disease. It can be obtained fresh every day from perfectly healthy calves, and within a day or two can be at hand for use in any town in this State, at a cost of from seven to twelve cents for each "slip" or "point." The Board of Health in each of the cities is earnestly requested to keep such a supply of *vaccine* at hand that it can instantly meet any exigency, or furnish a neighboring community with a few points of the lymph at cost. It should be inserted by physicians only, and they should examine the result at the end of seven days.

What to do when small-pox occurs:

(1.) Place the sick in a separate room from which all clothing, carpets, upholstered stuff and the quilts and feather bedding have been removed. In such a room with open windows and an open fire, keep the sick and nurses entirely separated (quarantined) from all other persons until the doctor and health officer takes charge. Then follow their requirements.

(2.) Let all persons who are near the sick be immediately vaccinated afresh, and let it be understood from the first that all bedding, clothing, towels and cloths which are touched or used by the sick shall be burned; and every place where the sick are, and where there is any thing that has come from or been exposed to them, shall be thoroughly disinfected as soon as possible.

(3.) A separate place, or even a hut constructed for the purpose, should be so prepared as to be safer for the sick than any ordinary dwelling rooms; that is, that the fresh air and sanitary care and nursing shall be the best possible; and that it shall be an apartment and locality from which th contagion will not be spread abroad.

(4.) That no delay or objection shall prevent the vaccination of all persons who have been in any manner exposed, or suspected of exposure, to the contagion. That if fresh vaccine is not at hand, the physician, or the health officer shall telegraph to the nearest person who can supply it. If the request is not immediately complied with, then telegraph the State Board of Health.

(5.) In case of death wrap the corpse in a sheet saturated with the strongest disinfectant, and bury it in a deep grave within twenty-four hours, and without a public funeral.

(6.) Disinfect according to the rules given in the State Board's circular on disinfection No. (16).

Special recommendations.

The State Board of Health recommends that in whatever city, village or town small-pox appears, the entire neighborhood in which there has been any communication with the patient, or exposure to the contagion, shall be notified that the *State Board of Health requires that every person shall be protected by vaccination ;* that whatever materials are infected shall be destroyed by fire or shall be kept in the zinc and salt solution, and be boiled without removal from the premises ; that rooms and furniture suspected of contagion shall be fumigated with sulphur as directed by this Board's rules ; that tramps and other persons suspected of infection with small-pox shall be taken in charge by the police and the sanitary authorities ; that employers shall advise their companies of employed persons to be vaccinated ; and, in case of small-pox in their vicinity, to make such vaccinations one of the conditions of being continued in employment. This rule should be strictly enforced in all manufactories that make goods that are liable to become infected, and especially should be a standing regulation in public houses, and in all classes employed on railroad trains and passenger vessels.

Form of report to the State Board of Health and to the Local Board

(Name)
....is sick with small-
(Name of house and place)
pox (or varioloid) at.......................... ....The
(Date)
eruption began..............................
It is believed the contagion was taken at..........................
by exposure to..............................
No. of persons now exposed to patient......
Who has the responsible care and custody of the case ?............
(Signed)... ...
(P. O. address)....................................
REQUEST:______________________________

Such a notice, with the request that needs to be made, should be sent to the health officer or the nearest member of the local Board of Health. If the physician is already in attendance he should sign it; but if no physician has reached the patient, the householder and any other person that has charge of the case should sign this first report and request, and send it to the family physician or to the health officer. The physician who first sees the case or the health officer, should write out such a brief report and his own request and send it by mail to the secretary of the State Board of Health. If in a place where there is no local authority, health officer or physician, send the report by first mail to the secretary of the State Board of Health.

Subsequent Reports. The physicians and the Health Officer will please agree upon the report which shall be made to the State Board on its card (No. 31) for reporting the history of cases of small-pox.

Vaccination Records and Reports. The form of records of inspection and vaccination prepared by the State Board of. Health for the use of health authorities and physicians, is given on the leaflet marked [No. 39]. Every Health Officer is earnestly requested to make and preserve such a record, and to transmit a copy of it to the State Board. Physicians who vaccinate ten or more persons at any time during the year are likewise requested to make up and preserve this kind of record [No 39], and to give the State Board of Health a copy. The blank form will be furnished and the postage supplied for such reports, on notice.

Vaccination, properly applied, is as effective now as it ever was, but the medical and sanitary care to secure the perfect results which give protection are so vitally important, that the records of experience are to be henceforth preserved and studied to enable the people to obtain and voluntarily seek the benign protection which is needed against the loathsome contagion which threatens every person who is not well vaccinated. Prudent and timely action will prevent the attack of this blighting pest, as well as stamp it out. Panic and delay are worse in the presence of small-pox than in the midst of a raging conflagration in a city; and the vaccinator and sanitary inspector disarm the contagious destroyer as readily as the fire brigade — at a touch of the fire keys — will suppress flames, before panic can occur. The timely action, controlling means, and suitable methods prevent panic and loss in the presence of small-pox. For this reason vaccination is a public duty, and Sanitary Law to provide for it and prevent contagion is a necessity.

Published by order of the Board,

ELISHA HARRIS,

Secretary.

[No. 41.]

STATE BOARD OF HEALTH OF NEW YORK.

MEMORANDUM OF RULES TO BE ADOPTED TO PREVENT THE SPREADING OF CONTAGIOUS DISEASES IN SCHOOLS.*

The following sanitary rules are recommended by the State Board of Health for adoption by all School Boards and Trustees. They are presented in a form suited for direct transfer to the Public School Regulations, with the exception of the bracketed [ ] portions, which may depend on local circumstances for their application or feasibility:

I. Every person entering the public schools of .... must give satisfactory evidence of protection against small-pox, or be excluded until the rule is complied with, as provided by the statute of 1860. [See synopsis of this statute as appended.]

II. The fact of vaccination and protection should be entered with each name on the school record [and on transfer or promotion lists, so as to avoid further inconvenience to the pupil].

III. Persons affected with diphtheria, measles, scarlet fever, or small-pox, must be excluded from school until the school officer's permission is granted.

IV. Intercourse between the school and family or house where there is a case of any one of these contagions, must be forbidden until the official permission is given.

V. It will be the duty of every teacher and school officer who discovers a case of any of these contagious diseases, to cause the fact to be immediately reported to the local Board of Health. [The Board of Health should assume the sanitary duty of quarantining and disinfecting, as well as that of permitting the pupil's return, etc.]

VI. If a child is ascertained to have attended school while affected with any of these contagions, the local Board of Health shall be requested to direct the proper disinfection of the school premises. In the absence or delay of such sanitary authority, the physician in attendance, with one of the school officers, should direct this duty in accordance with the rules for Disinfection and Cleansing given in the State Board's Circular, No. 16.

VII. Rule III must invariably include all persons from the family where the case of sickness exists. [It should extend, also, to all persons living in the same house, at the discretion of the local Board of Health.]

VIII. [If there is no local Board of Health, the school authorities, with medical advice, if possible, should decide the question in brackets under Rule VII, and should take the advice and assume the duties mentioned in Rules V and VI.]

IX. [It is desirable that all cases known to the Board of Health should be at once reported to the school authorities; and the latter should request the Board of Health to do so, and every teacher and school officer not only should promptly inform the health authorities of each known or suspected case of contagious disease, but should endeavor to have the sanitary rules enforced, and give proper information to the families concerned.] In such instances the duties of all these officers and persons are reciprocal, and none can prudently be neglected.

---

*Extracted from the Second Annual Report of the State Board of Health.

This memorandum is published by the State Board of Health, as information and advice,—earnestly recommended to the attention of all school officers and local Boards of Health; and as this Board has deemed it a duty to consult the State Superintendent of Public Instruction, every interest of the schools has been carefully considered, and the rights and duties of their pupils, trustees and boards of education duly regarded.

EDWARD M. MOORE, M. D.,
President.
ELISHA HARRIS, M. D.,
Secretary.

ALBANY, 1882.

I heartily approve the foregoing, and commend the same to the common school trustees and others who are responsible for the welfare of the schools.

NEIL GILMOUR,
Superintendent of Public Instruction.

SYNOPSIS OF THE STATUTES RELATING TO CONTAGIOUS DISEASES IN TOWNS AND SCHOOL DISTRICTS.

The statute (chapter 438, Laws of 1860) makes the following provisions:

1. The trustees of school districts, and the school boards, are empowered to exclude from the public schools all unvaccinated persons until they are vaccinated.

2. This power may be exercised by trustees or boards, after passing a resolution to that effect and posting a notice for at least ten days in two or more conspicuous places within the limits of their respective school-board or district organizations. Such notice should offer free vaccination to those unable to pay. [The form necessary in such cases is given in the circular (No. 17) of the State Board of Health. That circular has been sent to every school-district clerk in the State.]

3. The trustees or board are further empowered to employ and pay a physician who shall make a list of all persons within the school ages that have not been vaccinated, and provide with certificates of vaccination those persons whom the said trustees or board directs. The local Board of Health is required, under chapter 431, of 1881, to supply all the necessary means for gratuitous vaccination, and it is declared to be its duty "*to make all needful provisions for immediately obtaining the necessary means for thorough and safe vaccination of all persons within the said jurisdiction who may need the same.*"

4. The amount expended is to be included in the annual tax bill. [The new law enables the town, village or city to meet the expense by its local Board of Health.]

5. The trustees of school-districts are required to include in their

annual report the number in their several districts between the ages of five and twenty-one who are vaccinated, and the number not vaccinated. [Every local Board of Health should require compliance with this law.]

Request. — School Officers who receive this circular will please detach this *leaf*, fill in the names officially, and use it as a *posted notification* as soon as the Trustees or School Board shall have ordered the rule for Vaccination to be complied with.

[No. 17.]

VACCINATION NOTICE.

To whom it may concern:

At a meeting of the Board of Trustees, of School District No. —, of ————, N. Y., held ———— —, 1882, it was

Resolved (In accordance with the statute entitled "An act to encourage and provide for a general vaccination in this State," passed April 16, 1860), to exclude from the school any child or person who has not been vaccinated, and until such time when said child or person shall become vaccinated, and in pursuance of said act the said Board has designated (or agreed with) Dr. ————* to vaccinate all who may desire to attend said school, whose parents or guardians are unable to obtain such vaccination.

☞ The ten days' notice, required by law, is hereby given.

By order of the Board.
(Signed)

....

....

---

* Or with the Health Officer, Dr. ————.

The State Board of Health of New York recommends to the Trustees, or Board of Education, in every school district in the State, that an order be made, and a provision announced, concerning the *vaccination that is required by law* for the protection of schools against small-pox. The above form of a *resolution* and posted *notice* is recommended to all school authorities.

By direction of the State Board of Health.

ELISHA HARRIS,
November 1, 1882. *Secretary.*

[Officers and friends of the Common Schools who receive these papers, will please examine this Circular and the list of inquiries, and favor the State Board with replies.

[No. 43.][a]

[Extract from No. 43 of the Series of Sanitary Papers.]

State Board of Health of New York.

NOTES AND CONCLUSIONS

UPON THE RESULTS OF THE INSPECTION OF SCHOOL-HOUSES UNDER THE COMMITTEE ON PUBLIC INSTITUTIONS AND UPON DR. LINCOLN'S SPECIAL REPORT.

The results of personal inspection are found to harmonize quite generally with the replies which have been sent in by school district officers relating to the health questions submitted by this Board in circular No. 35. These results of the inquiry, by means of the circular to school officers, are yet incomplete. They will be studied advantageously at the expiration of another year; for over 11,400 school districts in the rural parts of the State are day by day making their returns upon the questions of that circular.*

The conclusions reached by the committee, and by Dr. Lincoln who labored with it for a period of three months, are briefly summarized as follows:

1. Structural improvements are being made in the school-houses in many districts; there is a recognized attention to some of the requirements of health that have been neglected in the old school-houses.

2. The committee has found only about one in fifteen of the common school-houses well outfitted for protecting the health of the pupils. Even in that one there is oftener a neglect of sufficient ventilation than a suitable provision for it.

3. As a general fact, ventilation in the common school-houses is insufficient, and the means for it badly designed. When good, its excellence depends chiefly upon open windows and special facilities for controlling them.

4. Over-crowding is a prevailing fault, and even a wrong, in a majority of the school-houses which the committee and Dr. Lincoln have reported upon. The exceptions to this rule are noticeable in some of the diagrams printed in the report. In many of the schools the over-crowding is such as to endanger the health and life of the children, and taken in connection with defective ventilation, is a matter of momentous importance to the most loved and valued of lives in the families that send their children to the common schools.

5. In numerous towns, villages and cities, as shown in the report, there is a disgusting, degrading and harmful neglect of sanitary cleanliness in and about the school buildings, especially as regards the privies† and the means for the proper separateness and convenience of the sexes in relation to these matters.

---

* The report by the Standing Committee on Public Institutions presents notes and illustrations from the committee's inspections, in a chapter preceding this in the Second Annual Report.

† Some improvements in plans for the "hopper" and "tub" methods of sanitary closets for schools are shown on pages 156 and 412 in this Board's Second Annual Report.

6. Such neglect of cleanliness and decency should be interfered with and prevented by local sanitary authority. The public health, the bodily welfare of the children, and their moral safety alike require that this duty shall be attended to promptly, and by peremptory orders wherever necessary.

7. The supply of drinking water for the common school children is much neglected, excepting where hydrants, from the public water service, exist upon the premises.

8. Wardrobes or rooms, with pegs or brackets upon which to suspend outer garments and wet clothing, are seldom found suitably placed, and often they are neglected altogether.

9. Hand-basins, wash-stands or lavatories are wanting in a great proportion of the common school-houses.

10 The experiment of omitting the old practice of school recesses between the noon hour and the opening and closing of school, is being extensively adopted with doubtful — probably injurious — results.

11. The recreations needed by school children, under the name of light gymnastics or play, are confessed to be of great use to the younger classes in the common schools ; but it is found that the people do not suitably appreciate such physical exercises. It is desired, therefore, that teachers and parents should more thoroughly understand the reasons for encouraging and perfecting facilities for them.

12. There is found to be special reason for urging that girls shall not be deprived of the means of health which innocent and regulated gymnastics afford.

13. There is much neglect of, yet an increasing attention to, school seats and desks. This subject is found to need even greater attention than it is receiving.

14. The permanent injury to the eye-sight of school children is so frequent, and yet so preventable, that the known causes of such harm should be ascertained and provided against in every school. The proper lighting of the school-rooms, the best adjustment of seats, desks and black-boards, and the necessary regulations of study and exercise should be secured under competent medical advice, in which in every new or remodelled school-house the most approved lighting and the best arrangement of seats, desks, etc., for the protection of eye-sight, and for the general welfare of the pupils, should be provided.

15. The reception of vaccination by school children, under direction of their parents and the school officers, is found to have nowhere produced inconvenience or serious dissatisfaction. It seems eminently desirable, and certainly practicable, to secure general compliance with the statutes relating to the vaccination of school children as now administered under advice of the State Board of Health. (See circulars Nos. 17, 38 and 41.)

16. There is an obvious necessity for the promulgation and adoption of sanitary rules and regulations for the protection of health and life in schools as now recommended by the Board. (See circular No 41.)

EDWARD M. MOORE, M. D., *President.*
ELISHA HARRIS, M. D., *Secretary.*

[No. 24.]

STATE OF NEW YORK.

Concerning the Law to Prevent Adulteration of Food and Drugs.

OFFICE OF THE STATE BOARD OF HEALTH,
ALBANY, *June* 25, 1881.

At a meeting of the State Board of Health, held on the 23d of June, the Secretary was directed to issue a circular "calling attention to the provisions of chapter 407 of the Laws of 1881, and inviting information and suggestions to promote the objects of this law."

The State Board of Health is required by this law to take cognizance of the interests of health as they relate to food and drugs, and the adulterations of the same. For this purpose it has undertaken the necessary investigations, and it now appeals to the people of the State for information and suggestions that may lead to the correction of wrong practices which these provisions of law are designed to prevent.

Information and voluntary reports are specially desired concerning the following points :

In regard to Food-articles :

1. Whatever is known, or suspected of the adulteration of milk, condensed or uncondensed.
2. Whatever is known or suspected of adulterations and spurious materials sold as dairy butter.
3. Whatever is known or suspected of spurious or artificial liquids sold as wine.
4. Whatever spurious or adulterated substances are combined with or sold as sugar.
5. Whatever alkaline and other earthy substance is fraudulently sold as soda and its salts.
6. Whatever artificial mixtures are sold as baking powders, concerning which there is proof of injurious effects on health.
7. Whatever sugars, confections, or other mixtures, are known or believed to contain gypsum, or other earthy and mineral or metallic substances.
8. Whatever substances, mixtures or compounds recognized or sold as articles of food, drink, or medicine, are in, or to be placed in, the market for sale, and which are below the natural quality or strength, or which in the judgment of those concerned may be sold and used as articles of food, beverage, or medicine, in accordance with the exemptions provided in sections 3 and 4 of chapter 407.

In regard to Drugs or Medicines :

1. Whatever substances are known or suspected of any adulteration, or any depreciation from the *officinal* standards of the Materia Medica, and the Pharmacopœia, as designated in section 2, chapter 407 of the Laws of 1881.

2. Whenever a drug or compound, the composition of which is not established by a national pharmacopœia, shall be manufactured, offered and used in the State of New York, the standard ingredients of its composition and the range of variability from such standard or standards should be duly certified and officially filed at the office of the State Board of Health. There are medicinal compounds, of this kind, of such practical and extensive use, that their correct standards should be maintained by whoever makes or sells them.

This Board has appointed eight distinguished chemical analysts, located in various parts of the State, to serve under this law. Arrangements have been made for collecting the necessary samples of food, articles and drugs.

Whenever a citizen of this State desires to have samples of food or drugs tested, which are suspected of adulteration or other fault, he will please give notice by mail to the Secretary, or to the chairman of the committee of this Board under whose supervision the analyses and investigations are conducted, who will return his requests, etc., concerning the same.* The rules thus officially given in each case for procuring and sealing up samples for analysis should be followed.

Requests.—All who are interested in promoting the welfare of life and health by guarding against adulterated and deleterious articles of food, beverages and medicines, will please carefully observe and inquire concerning the illegal traffic in such articles; and this Board specially requests that whenever any person is cognizant of a case, or of cases, in which there is, or seems to be, evidence of poisoning or injury from the use of any food-articles, beverages, drugs, condiments, and the accessories of food, information should be immediately given to the State Board of Health at its Central Office, Albany, and the reason for such opinion should be at once communicated, with the name of the informer. All such names and information will be so reserved, and the Board's actions will be so directly responsible, that no inconvenience shall result to informants.

The State Board of Health desires the fact to be well understood by the public, that this law originated as a national measure for the protection of the people, as recommended by the National Board of Health and National Board of Trade; and that in the State of New York its administration will be based upon effectual co-operation of the State Board of Health with the people and honest producers and tradesmen, and upon the faithfulness and skill of this Board's carefully selected chemical analysts.

On behalf of the State Board of Health,

ELISHA HARRIS, *Secretary.*

---

*The communications may be addressed to the care of the Secretary of the Board, Albany.

[No. 24.]

AN ACT to prevent the adulteration of food or drugs.

[Chapter 407, Laws of 1881. Passed May 28, 1881.]

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. No person shall, within this State, manufacture, have, offer for sale, or sell any article of food or drugs which is adulterated within the meaning of this act, and any person violating this provision shall be deemed guilty of a misdemeanor, and upon conviction thereof, shall be punished by fine not exceeding fifty dollars for the first offense, and not exceeding one hundred dollars for each subsequent offense.

§ 2. The term "food," as used in this act, shall include every article used for food or drink by man. The term "drug," as used in this act, shall include all medicines for internal and external use.

§ 3. An article shall be deemed to be adulterated within the meaning of this act—

a.— In the case of drugs.

1. If, when sold under or by a name recognized in the United States Pharmacopœia, it differs from the standard of strength, quality or purity laid down therein.

2. If, when sold under or by a name not recognized in the United States Pharmacopœia, but which is found in some other pharmacopœia or other standard work on Materia Medica, it differs materially from the standard of strength, quality or purity laid down in such work.

3. If its strength or purity fall below the professed standard under which it is sold.

b.— In the case of food or drink.

1. If any substance or substances has or have been mixed with it so as to reduce or lower or injuriously affect its quality or strength.

2. If any inferior or cheaper substance or substances have been substituted wholly or in part for the article.

3. If any valuable constituent of the article has been wholly or in part abstracted.

4. If it be an imitation of, or be sold under the name of, another article.

5. If it consists wholly or in part of a diseased or decomposed, or putrid or rotten, animal or vegetable substance, whether manufactured or not, or, in the case of milk, if it is the produce of a diseased animal.

6. If it be colored, or coated, or polished, or powdered, whereby damage is concealed, or it is made to appear better than it really is, or of greater value.

7. If it contain any added poisonous ingredient, or any ingredient which may render such article injurious to the health of a person consuming it: Provided, that the State Board of Health may, with the approval of the Governor, from time to time declare certain articles

or preparations to be exempt from the provisions of this act: And provided further, that the provisions of this act shall not apply to mixtures or compounds recognized as ordinary articles of food, provided that the same are not injurious to health and that the articles are distinctly labeled as a mixture, stating the components of the mixture.

§ 4. It shall be the duty of the State Board of Health to prepare and publish from time to time lists of the articles, mixtures or compounds declared to be exempt from the provisions of this act in accordance with the preceding section. The State Board of Health shall also from time to time fix the limits of variability permissible in any article of food or drug, or compound, the standard of which is not established by any national pharmacopœia.

§ 5. The State Board of Health shall take cognizance of the interests of the public health as it relates to the sale of food and drugs and the adulteration of the same, and make all necessary investigations and inquiries relating thereto. It shall also have the supervision of the appointment of public analysts and chemists, and upon its recommendation whenever it shall deem any such officers incompetent, the appointment of any and every such officer shall be revoked and be held to be void and of no effect. Within thirty days after the passage of this act, the State Board of Health shall meet and adopt such measures as may seem necessary to facilitate the enforcement of this act, and prepare rules and regulations with regard to the proper methods of collecting and examining articles of food or drugs, and for the appointment of the necessary inspectors and analysts; and the State Board of Health shall be authorized to expend, in addition to all sums already appropriated for said board, an amount not exceeding ten thousand dollars for the purpose of carrying out the provisions of this act. And the sum of ten thousand dollars is hereby appropriated out of any moneys in the treasury, not otherwise appropriated, for the purposes in this section provided.

§ 6. Every person selling or offering or exposing any article of food or drugs for sale, or delivering any article to purchasers, shall be bound to serve or supply any public analyst or other agent of the State or local board of health appointed under this act, who shall apply to him for that purpose, and on his tendering the value of the same, with a sample sufficient for the purpose of analysis of any article which is included in this act, and which is in the possession of the person selling, under a penalty not exceeding fifty dollars for a first offense, and one hundred dollars for a second and subsequent offenses.

§ 7. Any violation of the provisions of this act shall be treated and punished as a misdemeanor; and whoever shall impede, obstruct, hinder or otherwise prevent any analyst, inspector or prosecuting officer in the performance of his duty shall be guilty of a misdemeanor, and shall be liable to indictment and punishment therefor.

§ 8. Any acts or parts of acts inconsistent with the provisions of this act are hereby repealed.

§ 9. All the regulations and declarations of the State Board of Health made under this act, from time to time and promulgated, shall be printed in the statutes at large.

§ 10. This act shall take effect at the expiration of ninety days after it shall become a law.

[No. 46.]

STATE BOARD OF HEALTH OF NEW YORK.

CHAPTER 292, LAWS OF 1882.

AN ACT to regulate the standard of illuminating oils and fluids for the better protection of life, health and property.

PASSED June 6, 1882; three-fifths being present.

SECTION 1. No person, company or corporation shall manufacture or have in this State, or deal in, keep, sell or give away, for illuminating or heating purposes in lamps or stoves within this State, oil or burning fluid, whether the same be composed wholly or in part of naphtha, coal oil, petroleum or products manufactured therefrom, or of other substances or materials, which shall emit an inflammable vapor which will flash at a temperature below one hundred degrees by the Fahrenheit thermometer, according to the instrument and methods approved by the State board of health of New York.

§ 2 No oil or burning fluid, whether composed wholly or in part of coal oil and petroleum or their products, or other substance or material, which will ignite at a temperature below three hundred degrees by the Fahrenheit thermometer, shall be burned in any lamp, vessel or other stationary fixture of any kind, or carried as freight, in any passenger or baggage car, or passenger boat moved by steam power in this State, or in any stage or street car drawn by horses. Exceptions as regards the transportation of coal oil, petroleum and its products are hereby made when the same is securely packed in barrels or matallic packages, and permission is hereby granted for its carriage in passenger boats moved by steam power when there are no other public means of transportation. Any violation of this act shall be deemed a misdeameanor and subject the offending party or parties to a penalty not exceeding three hundred dollars, or imprisonment not exceeding six months, at the discretion of the court.

§ 3. It shall be the duty of the State board of health of New York to recommend and direct the nature of the test and instruments by which the illuminating oils, as hereinbefore described, shall be tested in accordance with this act. It shall be the duty of the public analysts who may now be employed by the State board of health, or who may be hereafter appointed, to test such samples of suspected illuminating oils or fluids as may be submitted to them under the rules to be adopted by the said board, for which service the said board shall provide reasonable compensation at the first quarterly meeting of the State board of health held after the passage of this act; it shall adopt such measures as may seem necessary to facilitate the enforcement of this act, and prepare rules and regulations with regard to the proper methods of collecting and examining suspected samples of illuminating oils, and the State board of health shall be authorized to expend, in addition to all sums already appropriated for said board, an amount not exceeding five thousand dollars for the purpose of carrying out the provisions of this act And the sum of five thousand dollars is hereby appropriated, out of any moneys in the treasury not otherwise appropriated, for the the purposes of this section provided.

§ 4. Naphtha and other light products of petroleum which will not stand the flash test required by this act may be used for illuminating or heating purposes only :—

In street lamps and open air receptacles apart from any building, factory or inhabitated house in which the vapor is burned

In dwellings, factories or other places of business when vaporized in secure tanks or metallic generators made for that purpose in which the vapor so generated is used for lighting or heating.

For use in the manufacture of illuminating gas in gas manufactories, situated apart from dwellings and other buildings.

§ 5. It shall be the duty of all district-attorneys of the counties in this State to represent and prosecute in behalf of the people, within their respective counties, all cases of offenses arising under the provisions of this act

§ 6. Nothing in this act shall be so construed as to interfere with the provisions of chapter seven hundred and forty-two of the laws of eighteen hundred and seventy-one, as regards the duties of the bureau of combustibles of the city of New York, or any other statutes not conflicting with this act, provided that nothing in this act shall be deemed to interfere with or supersede any regulation for the inspection and control of combustible materials in any city of this State made and established in pursuance of special or local laws or the charter of said city.

§ 7. All acts or parts of acts inconsistent with this act are hereby repealed.

§ 8. This act shall take effect sixty days after its passage

[No. 46.]

STATE BOARD OF HEALTH OF NEW YORK.

reliminary Statement Relating to the Law For Safety-Testing Illuminating Oils.

At a meeting of this Board, the 22d of June, its Secretary was directed to pre- ent a statement to the public preparatory to the official announcement of the les, methods and instruments which will be adopted when the act takes effect.

This law, Chapter 292 of 1882, "to regulate the standard of illuminating oils d fluids, for the better protection of life, health and property," takes effect the rst week in August, and is designed to prevent the dangerous exposure of ex- losive products of petroleum. As repeatedly suggested by the Governor, this w has been enacted for the protection of life and health. It is believed that e efforts for this purpose can work no hardship to any persons who use or deal any legitimate illuminating oils. It is required that illuminating fluids which ve off explosive vapor that will flash at a temperature below 100° Fahr., shall hall not be used for lighting purposes. Also that oils which ignite or burn at a mperature less than 300 Fahr., shall not be used upon railway passenger cars r upon vessels moved by steam.

The few exceptions to these standards are permissible only when controlled special mechanism and used in special kinds and places of lighting, as in reet lamps, in gas making, etc. It is to be hoped that these exceptions will not ove disastrous to life.

As it is estimated that upwards of thirty thousand lives have been destroyed the explosive products of petroleum during the brief period that they have en in use for lighting, this fact alone is sufficient reason for this new law and e present efforts to control and prevent the causes of such deplorable danger d harm to human life.

In view of the just demands of the public that the State Board of Health ould devise suitable methods of instruction and official action to prevent fatal cidents from these products of petroleum, this Board more than a year ago ovided for such investigations as should fully explain the causes of peril from, d the means of safety-testing of, the petroleum oils used in lighting. The re- lt of this investigation is now printed as a chapter in the Board's Second An- al Report, and is also separately published for distribution throughout the ate, as No. 45 of the Board's current series of SANITARY PAPERS for the ople. In that document and in the duties now imposed upon this Board, it deemed expedient to present the facts which all intelligent persons can readily derstand concerning necessary precautions and means of security.

All these facts derive their importance from the circumstance that those very ht and quickly vaporizable constituents of petroleum which escape from that bstance at a temperature much below 100 deg's. Fah., are not always separ- ed and taken away from the heavier elements of petroleum, and that the pres- ce of even a small percentage of these naphthous oils and vapors will render an herwise superior illuminating oil very dangerous from the liability to the formation of an explosive mixture of the naphthous vapor with common air, and inasmuch as these almost gaseous elements which thus endanger the untested oils impart brilliancy, or at least special facility in burning, there has been a strong temptation both to use and to offer for sale the kerosene oils which are thus dangerous. Testing to ascertain the presence or absence of the dangerously explosive element of the burning fluids is a duty to human life, and as the methods and apparatus for accurate testing must be in every respect trustworthy in orde to be useful, this Board has undertaken to present correct and readily applied instructions upon the subject.

As required by section 3 of the act, this Board will adopt and promulgate at its quarterly meeting on the ninth of August, the rules which will govern its service in securing the testing and practical instructions required in giving effect to the law, and it is believed that public opinion and the common interests of purchasers and dealers concerned in the operation of the law, will facilitate its enforcement.

The State Board of Health hereby announces, some weeks in advance of th time when the law is to take effect, that it will be an imperative duty to administer it impartially and faithfully, and that it seems expedient to advise all whos interests or duties are connected with the using of, or dealing in, those kinds o illuminating oils which will not abide the standards fixed by the law, to conside that it will be necessary to prepare and decide to offer for sale only such standard materials as will abide the prescribed tests.

Success in this duty will depend in no small.degree upon an enlightened public opinion which cannot fail to be created by a correct understanding of th facts now set forth in Document No. 45, before alluded to. It is prudent t state in advance that the obvious leniency of the law will warrant the mos faithful and vigilant application of it; for it will work hardship to those onl who either ignorantly or wantonly put in jeopardy the lives and domestic safet of people who must use kerosene for lighting.

The Board has resolved to send to the people the information they need fo their protection against explosive illuminating oils. The experts and the chemists who have been in consultation are agreed as to the minimum limit of safet which the tests required by law are to establish as standards. All who deal i or use petroleum illuminating oils now have ample time and facilities to secur themselves against loss or harm ; yet to do this they must understand and us the information which is offered, and which every local Board of Health, an every physician and chemist in the State can readily explain. All people wis an end to the "kerosene horrors," and since the refining of petroleum to any d gree of safety for use has removed all excuses for offering or using explosi fluids, the law which takes effect in August is based upon the belief that a reasonable persons will respect its requirements, and that whosoever disregar them will do so at the peril of penalties which that law imposes.

Submitted and published by order of the Board.

Elisha Harris, *Secretary.*

Office of State Board of Health of New York,
Albany, *June* 24, 1882,

[No. 67.]

STATE BOARD OF HEALTH OF NEW YORK.

BUREAU OF VITAL STATISTICS.

An Abstract of the Statutes of New York Relating to Marriage Ceremonials, the Public Registration of Marriages, and the duty of Persons authorized to Solemnize Marriage.

Laws Concerning Marriage.

In order to meet requests often made for a concise statement of the Laws of the State of New York relating to the duty of persons authorized to solemnize marriage, the following summary of the laws upon this subject have been carefully revised:

I. — What Persons are Authorized to Solemnize Marriages, and to Certify such Solemnization?

(1.) Ministers of the Gospel and Priests of every denomination.

(2.) Mayors, Recorders and Aldermen of cities.

(3.) Judges of the County Courts and Justices of the Peace.

(*a.*) Jews and also those designated in the Statute as Quakers (Friends), are authorized to solemnize marriage in the manner and agreeably to the regulations of their respective societies.

(*b.*) The right and privilege of registry and authentication of a marriage under the Statute is made dependent on its being solemnized by one of the officers, magistrates, ministers or priests, or in the manner above referred to.

II. — Marriage is forbidden between what persons.

(1.) Between parents and children; grandparents and grandchildren of every degree; brothers and sisters, as well the half as of the whole blood relations; and all such marriages are incestuous and void. And these prohibitions extend to illegitimate as well as to legitimate children.

(2.) Between persons when either of the parties to a marriage shall be incapable, for want of age or understanding, or incapable from physical causes of entering into the marriage state; or when the consent of either party shall have been obtained by force or fraud.

(3.) Marriage is forbidden to any person during the life-time of any former husband or wife of such person, unless (1) the marriage with such former husband or wife shall have been annulled or dissolved for some other cause than the adultery of the said person; or (2) unless such former husband or wife shall have been finally sentenced to imprisonment for life.

(4.) Males under 14 and females under 12 years of age are incapable of consenting to marriage; and the Courts may divorce females married under 14, without the consent of parents or guardians, if the marriage has not been ratified and there has not been cohabitation — since arriving at 14 years of age.

(5.) Persons authorized to perform the marriage ceremony are liable to be punished by fine or imprisonment if with knowledge they solemnize the ceremony between parties either of which is under the age of consent, an idiot or lunatic, or as to which there is a legal impediment existing.

III.—What is required of the Clergyman, Magistrate or other person who solemnizes a Marriage, as regards the ceremonials?

When solemnized by a minister or priest, the ceremony of marriage shall be according to the forms and customs of the church or society to which he belongs. When solemnized by a magistrate no particular form shall be required, except that the parties shall solemnly declare in the presence of the magistrate and the attending witness or witnesses that they take each other as husband and wife. In every case there shall be at least one witness, beside the minister or magistrate, present at the ceremony.

IV.—What is required as regards the official duty toward the persons about to be married.

"It shall be the duty of every minister, priest or magistrate required to solemnize a marriage to ascertain,—

"(1.) The Christian and surnames of the parties; their respective places of residence; and that they are of sufficient age to be capable in law of contracting marriage;

"(2.) The names and places of residence of two of the attesting witnesses, if more than one be present, and if not, the name and place of residence of such witness. He shall enter the facts so ascertained and the day on which such marriage is solemnized, in a book to be kept by him for that purpose.

"(3.) If either of the parties, between whom the marriage is to be solemnized, shall not be personally known to him, the minister or magistrate shall ascertain from the respective parties their right to contract marriage, and, for that purpose, he may examine the parties, or either of them, or any person under oath, which he is hereby authorized to administer, which examination shall be reduced to writing and subscribed by the parties, and either of the respective parties making a false statement under this oath shall be deemed guilty of willful and corrupt perjury, and shall be liable therefor."

The right of husband and wife to demand and receive a Certificate of their Marriage, at the hands of the Minister or Magistrate; what such certificate shall contain.

[This certificate is independent of the one returned to the Bureau of Vital Statistics.]

Whenever a marriage shall have been solemnized within this State, pursuant to this title, the minister or magistrate by whom the marriage was solemnized shall furnish on request, *to either party*, a certificate thereof, specifying —

(1.) The names and places of residence of the parties married, and that they were known to such minister or magistrate, or were satisfactorily proved by the oath of the parties themselves, or of a person known to him, that they were the persons described in such certificate and that he had ascertained that they were of sufficient age to contract marriage;

(2.) The name and place of residence of the attesting witness or witnesses, and

(3.) The time and place of such marriage;

(4.) The certificate shall also state that after due inquiry made, there appeared no lawful impediment to such marriage; and it shall be signed by the person making it.

V.—What is required in regard to the certified returns to be rendered to the Registering Officer of Vital Statistics.

(1.) One copy of a duplicate record, that has been made out in accordance with the forms prescribed by the State Bureau of Vital Statistics, shall be forwarded to the Registry Officer of the town, village or city where the ceremonial occurred, within three days of the marriage, and by such means as will insure its delivery, by mail or hand. The professional attestant of the marriage is by law responsible for required completeness and delivery of the marriage certificate, whoever assists in these duties.

(2.) The person who solemnizes the marriage must keep a perfect duplicate of the copy of record which has been forwarded to the Registry Officer of the Board of Health.

(3.) All names of persons must be accurately spelled and distinctly written.

The foregoing summary, comprising the chief points upon which general information is often desired, especially by parents, clergymen and magistrates, is respectfully submitted to all persons concerned in the solemnization and formal witnessing and attesting of the marriage ceremonial in the State of New York.

THIRD ANNUAL REPORT OF THE STATE BOARD OF HEALTH.

INDEX.

Page.
Abandoned canals, drainage of swampy beds of.....................31, 158–181
    cost of drainage of.... 181
        at Rome, Oneida Co.......... 184
Adirondack survey, what its work illustrates.. 42
Adulteration of food and drugs, administration of law to prevent...... 35
    conclusions concerning................................ 64
Ames, Dr., report on sanitary results of drainage of Genesee Valley canal, 33
Amsterdam, diphtheria in 244
Auburn, Water-street, swamp district and sewerage questions 236–240
    schools in.......... .... 39, 121
Baking powders.. 36
Beard, Dr. G. M., report by................ 33
Bell, R., Chief Engineer, letter of, on Genesee Valley canal drainage.... 166
Bennett, Col. Ensign, letter to, on drainage of Genesee Valley canal.. 166
Binghamton, winter cholera in.................................... 249
    engineer's report upon.................................... 248
Births, rules to be observed in the registration of...................... 334, 337
Boards of Health, local.. 5
    operation of.. 22–29
    State Board, notes by Erastus Brooks........ 300–302
Bone boiling and bone burning..... 287
Brooks, Hon. Erastus....... ... . 4, 64
    abstract of papers on Sanitary Government........................ 295
    report as chairman 80–84
    report on epidemic at Indian Lake.............................. 252
Burials, records of... 21
Buffalo, refuge hospital at........... 50
    Hamburgh Street and Main canal................................ 76
Canajoharie, small-pox in.. 12
    diphtheria in........ 242

Page
Canals abandoned, Chemung, drainage of 174
  report of engineer 175
  cost of drainage 181
Caroline, canal boat, small-pox on 13
Carroll, Dr. Alfred L., report on sickness at Pleasantville 41, 260–262
Casler, Mrs. S. J., death by kerosene accident 107
Catskill, small-pox at 11
Chandler, Prof. Charles F 4, 64
  report as chairman 85–108
Chemung canal drainage 33, 34
  at Summit level 175–180
Children, means for protecting life and health of 60
  their labor in mills 60
Coffee, adulterated 36
Colby, Albert L. 77
Committees, standing and special, of the Board 65
  report of executive and finance [A] 80–84
    of sanitary [B] 85–108
    of registration and vital statistics [C] 109
    on public institutions [D] 120–127
    on quarantine [E] 127–155
    on drainage, sewerage and topography [F] 156–241
    on prevalent diseases [G] 241–262
    on repressing and preventing contagious diseases [H] 262–282
Conclusions and recommendations of the Board 60–64
  of sanitary committee 102
Corinth, sawdust nuisances in 58
Courts, sanitary cases in 322–323
Contagious diseases, duty of repressing 262–272
Croes, J. J. R., Engineer, report on Nepperhan nuisance 217–223
Dansville, branch of Genesee Valley canal, drainage of 166
  report of engineer 167–172
  drainage of canal slip at 174
Death, certificate of 111
  records of 312, 313, 341–342
  rules to be observed in the registration of 334
Delavan, Dr. J. S., Health Commissioner 4, 64
  report as chairman 109–120, 285–295
Diarrhœal diseases 15, 245–251
Diphtheria and other contagious diseases 9, 61, 241–245
  hints for preventing 343
Diseases, prevalent 7–19
  means for preventing 61
  malarial and miasmatic 40, 41, 241
  report on prevalent 241–262
  diarrhœal 245, 247
  in Pleasantville 258–262
  contagious report on repressing and preventing 262–264
  prevention of avoidable 296

Page.

Diseases, infectious, visiting the sick in, and rules for............ 270–271
  contagious, sanitary papers relating to the prevention and control of, 343–357
Disinfection of sick room and hospital.......... 271
Districts of the State.......... 78, 102
Drainage, of abandoned canals.......... 32, 34
  areas.......... 41
  house, sanitary problems of.......... 44
  laws relating to systematic.......... 55
  at Summit Level.......... 175–180
  in Fairport.......... 182
  at Rome.......... 181–184
  at Auburn.......... 236–240
  systematic, of towns and villages.......... 230–241
  obstructions to, in village.......... 256
Dutcher, S. B., Supt. Public Works, letter on limitations of drainage.... 173–174
Dysentery, at Knowlesville.......... 15, 246
Egerton, Wm. S., Engineer, report on nuisance at Schodack.......... 198–199
  report on South Bay.......... 229–230
Effluvium, nuisances, report upon.......... 286–295
  Kill von Kull.......... 287
  from glucose factories at Buffalo.......... 288–294
Elliott, A. H., investigation of oil testers by.......... 86
Elmira, schools of.......... 39, 123
Emigrants, inspection of, in railway cars..........13, 16, 282–285
  ship's quarantine.......... 47, 50
  statistics of inspection of, for six months.......... 283
Expenditures by the Board.......... 34, 35
Fairport, nuisance at.......... 31, 182
  report of engineer on.......... 182–184
Fever, scarlet.......... 9
  yellow, at quarantine.......... 128–130
  enteric-typhoid.......... 251
    at Indian Lake.......... 252
  typhus.......... 253
    among railroad laborers.......... 254
  malarial.......... 255
    at Pleasantville.......... 256–260
  sanitary rules for preventing.......... 345
Financial statement of annual expenditures.......... 34, 35
Fleming, diphtheria in.......... 244
Food and drugs, conclusions concerning adulteration of.......... 62
  samples of.......... 97, 98
  circular concerning law to prevent.......... 360–361
  law to prevent.......... 362–363
Fort Edward, sawdust obstructions in Hudson river at.......... 197
Gardiner, James T., Supt. State Survey.......... 4, 64
  report as chairman.......... 156–241
Gay, Miss E., death by kerosene accident.......... 104
Genesee Valley canal, drainage.......... 29, 33, 159
  Dansville branch.......... 167–174
Geneva harbor nuisance.......... 225–229

Page.
Glens Falls, South, small-pox in.......................... 12
Glenville, diphtheria in.......................... 244
Govan, Dr. W., report on railroad laborers' lodgings.......................... 255
Governor of the State, relations to sanitary service.......................... 156
Grape sugar and starch factory wastes.......................... 294
    conclusions concerning.......................... 294
Hadley, sawdust nuisances.......................... 58
Harris, Dr. E., Secretary, statements by, 64, 79, 118, 241, 262–281, 308, 316, 318–369
Hart, Dr. H. de, report on sanitary wants and diseases at Pleasantville, 257–260
Havana, benefits of drainage.......................... 33
Health, public, officer, duties of.......................... 3, 24
    advice to, concerning contagious diseases and vital statistics..........
Hector, small-pox epidemic in.......................... 13, 14
Helps for completing records.......................... 339
Hornellsville, small-pox at, from infected passenger car.......................... 13, 14
Horseheads, obstructing dam at.......................... 32
Hospitals and refuges for contagious diseases..........263–264, 325–326
    in Catskill.......................... 264
    in the towns of Niagara and Queensbury.......................... 264
    plans and methods for.......................... 265–272
    conveyance of sick persons to.......................... 270
    rules for visitors to.......................... 270
Hudson, report upon South bay and sewage disposal..........30, 229–234
Hunt, Dr. James G., Commissioner.......................... 4, 64
Hunter's Point, nuisances at.......................... 29, 72
Indian Lake, epidemic at.......................... 251–253
Infectious diseases, sanitary precautions to prevent their spread.......... 347–357
Inspection of emigrant passenger trains.......................... 13, 16
Investigation of a summer resort.......................... 26
    of a malarial epidemic.......................... 27
    of outbreaks of diphtheria.......................... 27
Janes, Dr. E. H., report on typhus in New York city.......................... 253
Jenner, Dr., principles and rules taught by him.......................... 273–276
Kerosene, explosions and accidents from. See Oils..........103–109
Knowlesville, diarrhœal diseases at.......................... 246
Kuichling, Emil, report on abandoned Genesee Valley canal, Scottsville to Sonyea.......................... 159–165
    report on Dansville branch of.......................... 167–172
        Summit level of Chemung canal.......................... 175–180
        Fairport and Spencerport..........182–184, 203–210
        abandoned canal nuisance at Rome.......................... 184–186
        Schaghticoke.......................... 191–194
        Oneida creek, obstruction of.......................... 200–203
        pollution of mill-race and mill-pond.......................... 223–224
        mud margin of Seneca lake at Geneva.......................... 224–229
        sewerage of Hudson.......................... 231–234
        sewerage of Oneonta.......................... 234–236
        sewerage of Auburn.......................... 236–240
        Binghamton epidemic.......................... 248–250

Page.
Lattimore, Dr. Samuel A., appointment as public analyst 71
analysis of Knowlesville waters............................ 101, 246
Law, Prof. James, studies of kine pock and bovine virus culture....... 275
Laws, procedures under section 8, State Board of Health act... . ... 28, 34
to prevent adulteration of food and drugs........................35, 37, 362
circular concerning....................................... 360-361
to regulate standard of illuminating oils.... ....37, 85, 364-365
certain improvements needed. 55-59
organic act, establishing State Board of Health.... 304
amended, concerning local boards.... .. ..308, 311-315
ready reference to.. 316
statute concerning marriage......... 367-369
various, relating to public health..........................74, 315-317
Lockport, complaint of starch waste stenches 260
Love, Dr. E. G., appointment as public analyst........................ 70
Malaria and miasmatic diseases 40, 204
Maps and charts and diagrams, 162, 163, 183, 195, 198, 281, 204. 208-209, 212. 213, 226, 237, 258, 266, 267
Marriage, rules to be observed in registration of... 324
laws concerning.. 367-369
certificate of 113
statute concerning...................................... 367-369
Measles and whooping cough.... .... 10, 14
Milk, adulterated... 35
resolution of Board in reference to 78, 100
Mill wastes, decaying in streams.................................. 57
Minutes, abstract of 66
Mohawk Valley, diphtheria in....................................... 242
Moore, Dr. Edward M., President....... ....4, 64, 65
Morris, diphtheria in 245
Mt. Pleasant, malarial sickness in.................................... 14
National Board of Health, its aid in the Inter-State sanitary inspection of emigrants 284
New Rochelle, brewery nuisance at 29, 74
New York State Board of Health, notes by Mr. Brooks................ 300
permanent series of documents by 303
act to establish. 304-308
Niagara, refuge hospital at 50, 264
Nuisances, report of committee on effluvium nuisances 285
in Newtown creek and vicinity 285
inter-state obligations to prevent.......... 287-288
from starch and glucose wastes at Buffalo 288-295
procedures against illustrative cases....................... 319-322
Officers and membership of the Board.......................... 4
Oils, illuminating, law to regulate the standard of 37, 85, 364
resolution of Board in reference thereto... 75
directions for tests 88
temperature of, in lamps.. 91-95
accidents from........ 103-109
statement of Board concerning.............. 365-366

Page
Oneonta, sewerage problems ... 234, 236
Oneida creek, obstructions in ... 197, 200
  mill-race and pond in village, pollution of ... 223
Orton, Dr. Jno. G., report on Binghamton epidemic ... 247
Overcrowding of schools ... 124
Palatine, diphtheria in ... 242–243
Patterson, Putnam county, diphtheria in ... 243
Pauperism engendered by disease ... 63
Peekskill, refuge-hospital at ... 264
Perrinton, town of, nuisance at ... 211
Perry, Dr. A. L., inspector emigrant trains ... 14
Petroleum refineries, guaranty against nuisances from ... 286
Plattsburgh, sawdust nuisance at ... 57
Pleasantville, report of diseases in ... 258–262
Plumbing and house drainage ... 44, 46
  recommendations concerning ... 62
Population and vital statistics ... 19, 22
Privy pits, condemned ... 67
  of school-houses, do ... 124
Prosecutions ... 89, 98
Public funerals ... 66
Public health and prevalent diseases ... 7
Public institutions, report of committee on ... 120
Public instruction, Superintendent of, approval of circular on vaccination of school children ... 39
Public Works, Superintendent of, connection with Genesee Valley canal drainage ... 29
  resolution of Board in reference to drainage ... 71
Quarantine, system of ... 47, 50
  report on, by Health Officer of Port of New York ... 127–155
  yellow fever arriving at ... 128–130
  small-pox at ... 131–135
  vaccination at ... 135–141
  emigrant passenger law, 1853 ... 142
  hospitals on emigrant ships ... 149
  ventilation on passenger steamships ... 151
  surgeons on emigrant ships ... 153–156
  sanitary procedures in practice at ... 270–272
  domestic plans ... 272
Queensbury, refuge-hospital in ... 264
  sawdust nuisance at ... 58
Railroad, N. Y., L. E. & W., small-pox on trains at Hornellsville ... 13, 14
  sanitation of ... 46, 47
Refuges and temporary hospitals for contagious diseases ... 16, 19
  recommendations concerning ... 61, 262
  plans of ... 265–268
Registration, local ... 22, 116–118
  rules to be observed in ... 334–337
  responsibility of family and persons in charge ... 340

Page.

Registration of vital statistics, system adopted 109–115
- laws concerning 109
- cost per record 109
- publication and uses 110, 114
- forms for 110–115
- certificates for 111–113
- progress in 114
- abstracts of 115
- organization and outfitting of local 116–118
- of marriage and its forms 112, 116, 117
- in colonial times 118
- need of amended laws for 116–120
- rules to be observed 334–342

Report, subdivisions of 6, 7
- of executive and finance committee 80–84
- of sanitary committee 85–108
- of committee on registration and vital statistics 109–120
- of committee on public instruction 120–127
- of committee on quarantine 127–156
- of committee on drainage, sewerage and topography 156–241
- on prevalent diseases 241–262
- on repressing contagious diseases 262–272
- on effluvium nuisances 285–295

Rhinebeck, small-pox in 12

Rochester, vaccination in 12

Rome, abandoned canal, nuisance at 184

Russell, Leslie W., Attorney-General 4, 64

Salamanca, diphtheria in 244

Samples, collecting and examining of 89

Sanitary surveys and maps 41, 42
- conclusions concerning 62
- wants of people 60–64
- committee, report of 85–108
- rules to be observed in care of sick with infectious diseases 269–272
- government 295–302
- permanent series of documents 303–369
- procedures, modes and examples of 318
- papers relating to prevention and control of contagious diseases 343–357

Saranac river, waste from lumber mills upon 57

Sawdust nuisances at Fort Edward 31
- resolution of Board in reference to 76

Scarlet fever 9

Schaghticoke, nuisance at 29, 74
- obstructions in old channel of Hoosick near 187–197
- affidavits concerning 188
- report of engineer on 191–194
- map of 195

Scipio, diphtheria in 244

Schodack, obstructions to drainage at 197

Page.

- School hygiene, progress of efforts to promote, 38, 40
  - notes and conclusions on, 358–359
- Schools, recommendations concerning, 60
  - need of sanitary instruction in, 63
  - of Auburn, 121, 123
  - in Elmira, 123–125
    - Superintendent Tompkin's report on, 123–126
  - prevention of small-pox in, 355–357
  - notes and conclusions upon results of sanitary inspection, 358
- Schroon, diphtheria in, 243
- Schuyler lake, diphtheria in, 243
- Secretary of State Board of Health, statements by, 64, 79, 118, 241 et seq.
- Sewers and sewerage problems, 42, 45
  - in villages and cities, 157
- Sick, rules for the care of the, 269
  - conveyance to hospital, 270
- Simon, Mr., report to Parliament on public health, 53
- Small-pox in the State, 10–15, 51
  - circular on prevention of, 351–354
  - what the laws require, 351
  - prevention in schools, 355
- Smith, Dr. Wm. M., Health Officer of port, 4, 49, 64
  - report as chairman, 127–156
- Soldiers' and Sailors' Home, Bath, small-pox at, 11
- Spencerport, mill-pond and malaria at, 204
  - engineer's report upon, 207–210
  - conclusions and recommendations of the State Board concerning, 211
- State Board of Health, its work, 24, 28, 300–302
- State survey, what its work illustrates, 42
- Summer-Hill, diphtheria in, 244
- Summit level, report on drainage of, 175–180
  - at Horseheads, 181–182
- Superphosphate fertilizer factories, 287
- Tea, adulterated, 36
- Tenement-houses and their sanitary regulations, 45, 46
- Tonawanda, complaint of starch-waste nuisances, 74, 290
- Transactions, abstract of the Board's, 66, 79
- Trumbull, Dr. J. H, 14
- Tubercular consumption, 16
- Tucker, Dr. Willis G., appointment as public analyst, 70
  - analysis of Binghamton waters, 101, 251
- Typhus among Italian laborers, 15
  - at St. Stephen's Home, New York, 255
- Utica, nuisances at the gulf, 75
- Vaccination, public provision for, 51, 55
  - supervision of, 61
  - obligatory, and rules for, 273–277
  - conclusions concerning, 280
  - public duty of, 351
  - suggestions and warnings concerning, 352

Page
Virus, vaccine, rules for the protection of 279–281
  bovine, and other animal 274–275
  bovine, conclusions concerning 280–281
Vital statistics 19, 22, 109–115, 116–120
  supervision by the State Board 305–312, 313
Walser, Dr. W. C., report of 73
Walton, diphtheria in 244
Water, law needed to prevent pollution of 56
  description of samples 100
  analysis 101
Water-courses, and miasmatic districts, in Rensselaer, Washington and Oneida counties 187
  pollution of, in Erie, Ontario, Madison, Oneida, Columbia and Westchester counties 212
Wey, Dr. H. D., report on epidemic at Binghamton 247
Yonkers, Nepperhan river nuisance 30, 73, 76, 213
  Board's conclusions and recommendations upon 215–217
  engineer's report upon 217–223

STATE OF NEW YORK.

No. 111.

IN ASSEMBLY.

March 15, 1883.

REPORT

OF THE SUB-COMMITTEE OF THE WHOLE.

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 332, Printed No. 449, entitled "An act to amend the Code of Civil Procedure," reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Hoag,
Odell,
Sweet,
Clapp,
Williams,
Tuttle,
Weed,
Price,
11

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 280, Printed No. 384, entitled "An act to legalize the acts of the railroad commissioners of the town of Maryland, Otsego county, New York, and to authorize the payment by them of certain moneys in their hands to the commissioner of highways, in pursuance of the direction of the town board of said town," reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Hoag,
Odell,
Sweet,
Clapp,
Williams,
Tuttle,
Weed,
Price,
11

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 299, Printed No. 411, entitled "An act to amend chapter 220 of the Laws of 1866, and to provide for additional protection against fire in the village of Saratoga Springs," reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Hoag,
Odell,
Decker,
Clapp,
Williams,
Tuttle,
Weed,
Price,
11

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 294, Printed No. 403, entitled "An act in relation to assessors of the town of Lawrence, St. Lawrence county, and regulating the number thereof," reported in favor of the passage of the same, with an amendment, as follows:

Strike out all after the word "thereafter," in line six of section 2, and insert the words "when the said term of office of said two persons who are continued in office as assessors by this act shall respectively expire by limitation, resignation or death, there shall be chosen at the annual town meeting of said town of Lawrence a successor or successors for said office of assessor for the term of two years respectively."

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Hoag,
Odell,
Sweet,
Decker,
Clapp,
Williams,
Tuttle,
Weed,
Price,
12

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 307, Printed No. 419, entitled "An act to amend an act entitled 'An act to make school district No. 9 in the town of Pomfret a union free school district, passed March 17, 1858, chapter 34,'" reported in favor of the passage of the same, with amendments as follows:

Section 1, line 1, after the word "of," insert "chapter 34 of the Laws of 1858, entitled;" also amend the title so that it will read, "An act to amend chapter 34 of the Laws of 1858, entitled 'An act to make school district No. 9 of the town of Pomfret a union free school district.'"

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Hoag,
Odell,
Sweet,
Clapp,
Williams,
Tuttle,
9

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 301, Printed No. 413, entitled "An act to amend chapter 110 of the Laws of 1882, entitled 'An act to amend and consolidate the several acts relating to the village of Olean, in the county of Cattaraugus,'" reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,	Odell,	Tuttle,	
Campbell,	Sweet,	Weed,	
Roosevelt,	Clapp,	Price,	
Hoag,	Williams,		11

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 113, Printed No. 170, entitled "An act to amend chapter 440 of the Laws of 1880, entitled 'An act to provide for the protection of mechanics and others,'" reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,	Odell,	Tuttle,	
Campbell,	Decker,	Weed,	
Roosevelt,	Clapp,	Price,	
Hoag,	Williams,		11

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 329, Printed No. 439, entitled "An act to amend an act entitled 'An act to incorporate the village of Laurens, in the county of Otsego,' passed April 22, 1834," reported in favor of the passage of the same, with amendments as follows:

Section 1, line 1, strike out the words "said act," and insert "chapter 137, Laws of 1834, entitled 'An act to incorporate the village of Laurens, in the county of Otsego;'" also amend the title so that it will read, "An act to amend chapter 137, Laws of 1834, entitled 'An act to incorporate the village of Laurens, in the county of Otsego.'"

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,	Odell,	Tuttle,	
Campbell,	Decker,	Weed,	
Roosevelt,	Clapp,	Price,	
Hoag,	Williams,		11

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 289, Printed No. 398, entitled "An act to declare the validity of the election of county judge in the county of Rockland," reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Hoag,
Odell,
Sweet,
Clapp
Williams,
Tuttle,
Weed,
Price,
10

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 254, Printed No. 362, entitled "An act to amend section 892 of the Code of Criminal Procedure, passed June 1, 1881," reported in favor of the passage of the same, with an amendment, as follows:

Strike out from the title the words, "passed June 1, 1881."

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Hoag,
Odell,
Sweet,
Clapp,
Williams,
Tuttle,
Weed,
Price,
10

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 303, Printed No. 415, entitled "An act to amend section 11 of article 1 of title 1 of chapter 16 of part 1 of the Revised Statutes," reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Hoag,
Odell,
Sweet,
Clapp,
Williams,
Tuttle,
Weed,
Price,
10

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 251, Printed No. 342, entitled "An act to exempt the real estate of the trustees of the Ebenezer Baptist Church, situated in the city of New York, from certain assessments," reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Hoag,
Odell,
Sweet,
Clapp,
Williams,
Weed,
Price,
9

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 306, Printed No. 418, entitled "An act to amend chapter 492 of the Laws of 1881, entitled 'An act to amend chapter 555 of the Laws of 1864, entitled An act to revise and consolidate the several acts relating to public instruction,'" reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Hoag,
Sweet,
Decker,
Tuttle,
Weed,
Price, 9

For the Negative.

Odell,
Clapp,
Williams, 3

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 336, Printed No. 453, entitled "An act to amend chapter 117 of the Laws of 1853, entitled 'An act to authorize the formation of corporations for the erection of buildings,' and the acts amending the same," reported in favor of the passage of the same, with an amendment, as follows:

Section one, line one, strike out the words "said act," and insert "chapter 117 of the Laws of 1853, entitled 'An act to authorize the formation of corporations for the erection of buildings,' and the acts amendatory thereof."

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Hoag,
Odell,
Sweet,
Decker,
Clapp,
Williams,
Weed,
Price, 11

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 333, Printed No. 450, entitled "An act to amend the Code of Civil Procedure," reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Hoag,
Odell,
Sweet,
Decker,
Clapp,
Williams,
Weed,
Price, 11

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 255, Printed No. 363, entitled "An act to amend chapter 229 of the Laws of 1879, entitled 'An act in reference to the collection of taxes in the counties of Chautauqua and Cattaraugus,'" reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Hoag,
Odell,
Decker,
Clapp,
Williams,
Tuttle,
Weed,
Price,
11

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 296, Printed No. 405, entitled "An act supplemental to chapter 401 of the Laws of 1879, entitled 'An act authorizing the board of supervisors of Erie county to sell and convey certain real estate owned by said county,'" reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Hoag,
Odell,
Decker,
Clapp,
Williams,
Tuttle,
Weed,
Price,
11

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 265, Printed No. 374, entitled "An act to amend article 4 of title 1, chapter 16 of part 1 of the Revised Statutes," reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Hoag,
Odell,
Sweet,
Clapp,
Williams,
Tuttle,
Weed,
Price,
11

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 326, Printed No. 437, entitled "An act authorizing the court of claims to hear and adjust the claim of Vincent Conkling, of Horseheads, New York," reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Hoag,
Odell,
Sweet,
Clapp,
Williams,
Tuttle,
Weed,
Price,
11

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 316, Printed No. 426, entitled "An act to amend chapter 818 of the Laws of 1868, entitled 'An act to incorporate the village of Port Chester,'" reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Hoag,
Odell,
Sweet,
Clapp,
Williams,
Tuttle,
Weed,
Price,
11

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 302, Printed No. 414, entitled "An act to amend chapter 243 of the Laws of 1862, entitled 'An act making further provisions relative to encroachments upon highways,'" reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote :

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Hoag,
Odell,
Sweet,
Clapp,
Williams,
Tuttle,
Weed,
Price,
11

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 292, Printed No. 401, entitled "An act to authorize the supervisor of the town of Perry, in Wyoming county, to purchase lots of the trustees of Hope cemetery, and to remove to and reinter therein the bodies now remaining in the old burial-ground in the village of Perry, to sell said old burial-ground, and to defray the expenses of removing the bodies therefrom, and reinterring the same in new grounds," reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote :

For the Affirmative.

Welch,
Campbell,
Hoag,
Odell,
Sweet,
Clapp,
Williams,
Tuttle,
Weed,
Price,
10

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 281, Printed No. 385, entitled "An act to abolish the office of railroad commissioner in and for the town of Maryland, Otsego county, New York," reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Hoag,
Odell.
Sweet,
Decker,
Clapp,
Williams,
Tuttle,
Weed,
Price, 12

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 328, Printed No. 438, entitled "An act to amend chapter 249 of the Laws of 1864, entitled 'An act to provide for the incorporation of villages, passed December 7, 1847, and the several acts amendatory thereof, so far as the same relate to the village of New Rochelle, in the county of Westchester,'" reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Hoag,
Odell,
Sweet,
Decker,
Clapp,
Williams,
Tuttle,
Weed,
Price, 12

STATE OF NEW YORK.

No. 112.

IN ASSEMBLY,

MARCH 15, 1883.

LIST

OF SPECIAL GENERAL ORDERS.

The Speaker and Clerk, with the consent of the House, referred the following bills to the sub-committee of the whole under Rule 40.

Assembly bill 400, G. O. 291. Introduced by Mr. Earl :

An act to amend chapter 92 of the Laws of 1880, entitled "An act in relation to the common lands of the town of Gravesend."

Assembly bill 435, G. O. 325. Introduced by Mr. Erwin:

An act to amend chapter 639 of the Laws of 1881, entitled "An act to amend section 1 of chapter 537 of the Laws of 1880, entititled 'An act in relation to receivers of insolvent corporations.'"

Assembly bill 451, G. O. 334. Introduced by Mr. Healy :

An act to establish a uniform standard time throughout the State, and to amend title 1 of chapter 19 of part 1 of the Revised Statutes, relative to the computation of time.

Assembly bill 456, G. O. 339. Introduced by Mr. Bailey:

An act to incorporate the Home for the Destitute Children of Suffolk county.

Assembly bill 464, G. O. 369. Introduced by Mr. J. W. Higgins:

An act to regulate the fees and charges for elevating and storing grain by means of floating and stationary elevators and warehouses.

Senate bill 193, G. O. 197. Introduced by Mr. Pitts :

An act to change the name of the "Rochester and Charlotte Turnpike Road Company," and to regulate the management of said company.

Senate bill 129, G. O. 121. Introduced by Mr. Jacobs:

An act to authorize the State Board of Audit to hear and determine certain claims against the State.

Senate bill 113, G. O. 385. Introduced by Mr. Thomas:

An act to authorize the village of Deposit to issue bonds for the purpose of supplying said village with pure and wholesome water, and to create a board of water commissioners.

Assembly bill 460, G. O. 346. Introduced by Mr. Schwarz:

An act to regulate and define the duties of pawn-brokers and fixing a uniform rate of interest for all moneys loaned by them on goods and things in cities having a population of over 300,000 inhabitants.

Assembly bill 461, G. O. 349. Introduced by Mr. Butts:

An act to amend an act entitled "An act to incorporate the De Veaux College for Orphan and Destitute Children," passed April 15, 1853.

Assembly bill 474, G. O. 358. Introduced by Mr. J. W. Higgins:

An act to amend section 1 of chapter 366 of the Laws of 1882, entitled "An act to punish false swearing at political caucuses and assemblies."

Assembly bill 487, G. O. 364. Introduced by Mr. M. C. Murphy:

An act in relation to independent newspapers.

Senate bill 352, G. O. 386. Introduced by Mr. D. H. Evans:

An act to amend chapter 73 of the Laws of 1878, entitled "An act to amend chapter 881 of the Laws of 1869, entitled 'An act to amend an act entitled 'An act to incorporate the village of Port Byron,'" passed March 28, 1854.

STATE OF NEW YORK.

No. 113.

IN ASSEMBLY,

March 15, 1883.

LIST OF GENERAL ORDERS.

G. O.

405. Introduced by Mr. Farrar. An act to amend chapter 550 of the Laws of 1881, entitled "An act to amend chapter 460 of the Laws of 1879, entitled 'An act to amend chapter 123 of the Laws of 1854, entitled An act to promote medical science.' "

406. Introduced by Mr. E. Brooks. An act to protect the waters of any inland lake of this State.

407. (Senate.) Introduced by Mr. Jacobs. An act to authorize the State Board of Audit to hear and determine certain claims against the State.

408. Introduced by Mr. Pitts. An act making an appropriation for the payment of awards made by the State Board of Audit in favor of Charles A. Danolds, and the interest thereon.

409. Introduced by Mr. Howe. An act for the relief of the Leake and Watts Orphan House, in the city of New York.

410. Introduced by Mr. DeWitt. An act to amend the Code of Civil Procedure, and to repeal chapter 813 of the Laws of 1869.

411. Introduced by Mr. DeWitt. An act to amend the Code of Civil Procedure.

412. Introduced by Mr. Van Allen. An act to amend section 2642 of the Code of Civil Procedure.

413. Introduced by Mr. Childs. An act to legalize the official acts of George W. Hoyt, a justice of the peace in and for the town of Thompson, Sullivan county, N. Y., and to authorize him to execute and file his official bond and take and subscribe the official oath.

414. Introduced by Mr. House. An act to prevent the sale of dangerous articles to children.

415. (Senate.) Introduced by Mr. Lansing. An act to amend the Code of Civil Procedure.

G. O.

416. An act to amend sections 14 and 16 of chapter 628 of the Laws of 1857, entitled "An act to suppress intemperance, and to regulate the sale of intoxicating liquors."

417. Introduced by Mr. Quinn. An act for the protection of buyers of certain fermented liquors by the keg, cask, barrel or hogshead.

418. Introduced by Mr. E. Brooks. An act supplementary to chapter 737 of the Laws of 1873, entitled "An act in relation to the creation of water-works companies in towns and villages in the State of New York."

419. Introduced by Mr. Cary. An act entitled "An act relating to certain contracts for the lease and conditional sale of railroad equipment and rolling stock, and providing for the record thereof."

420. An act entitled "An act to amend chapter 506 of the Laws of 1870, entitled 'An act to facilitate the payment of taxes by railroad companies.'"

421. An act to enable the Staten Island Rapid Transit Railroad Company to have, own and run ferry-boats.

422. Introduced by Mr. E. Brooks. An act to amend an act entitled "An act to authorize David S. S. Sammis to establish and to continue a ferry across Fire island or Great South bay, from the village of Babylon to Fire Island beach in the county of Suffolk, passed March 25, 1873."

423. Introduced by Mr. E. Brooks. An act to authorize the Staten Island Terminal Railroad Company to transport its passengers and freight by ferry between New York city and Staten Island.

424. Introduced by Mr. Roesch. An act to amend section 7 of chapter 450 of the Laws of 1881, entitled "An act to secure registration of plumbers, and the supervision of plumbing and drainage in the cities of New York and Brooklyn."

425. Introduced by Mr. G. H. Lindsay. An act to amend chapter 319 of the Laws of 1848, entitled "An act for the incorporation of benevolent, charitable, scientific and missionary societies."

426. Introduced by Mr. J. W. Brooks. An act to amend chapter 140 of the Laws of 1850, entitled "An act to authorize the formation of railroad corporations and to regulate the same."

427. Introduced by Mr. Oakley. An act to prevent accidents by street cars and to provide for the greater comfort and convenience of passengers thereon.

428. Introduced by Mr. Crane. An act to amend chapter 504 of the Laws of 1870, entitled "An act to authorize the construction of a railroad in 125th street, and in certain streets and avenues in the city of New York."

429. Introduced by Mr. Erwin. An act to amend an act entitled "An act to authorize the formation of railroad corporations, and to regulate the same, passed April 2, 1850."

G. O.

430. An act to authorize the corporate authorities of the villages of Sandy Hill and Amsterdam, to regulate the speed of railroad steam cars running through the streets of said villages, and to provide penalties for the violation of such regulations or ordinances.

431. (Senate.) Introduced by Mr. Treanor. An act to secure the convenient public use during the night of steam railroads for the conveyance of passengers in the city of New York.

432. Introduced by Mr. Wilcox. An act to amend the Code of Criminal Procedure.

433. Introduced by Mr. O'Connor. An act to amend chapter 516 of the Laws of 1836, entitled "An act to incorporate the Elmira Mechanics' Society, as amended by chapter 170 of the Laws of 1869."

434. Introduced by Mr. Roesch. An act for the relief of the Chatham National Bank.

435. Introduced by Mr. Keyes. An act to confirm and legalize the acts of Jacob N. Mills as notary public of the county of Westchester, since the 30th day of March, 1882.

436. Introduced by Mr. Clarke. An act relating to stenographers in the Districts Courts in the city of New York.

437. Introduced by Mr. Ferris. An act to amend the Code of Criminal Procedure.

438. Introduced by Mr. H. D. Nelson. An act to amend the Code of Civil Procedure.

439. Introduced by Mr. Townsend. An act to amend the Code of Civil Procedure.

440. Introduced by Mr. Howland. An act to legalize the official acts of Frederick H. Kennedy, a justice of the peace in and for the city of Auburn, in the county of Cayuga.

441. (Senate.) Introduced by Mr. Russell. An act to provide for an additional number of commissioners to take the acknowledgments or proof of deeds, and other written instruments in other States and Territories, and in foreign States and countries.

442. (Senate.) Introduced by Mr. Thomas. An act to facilitate the assessment of property for the purposes of taxation.

443. (Senate.) Introduced by Mr. Thomas. An act in relation to the use of books belonging to the Sixth Judicial District Library by the justices of the Supreme Court of such district, and the expenses of transporting the same.

444. (Senate.) Introduced by Mr. Thomas. An act to amend certain sections of the Code of Civil Procedure.

445. (Senate.) Introduced by Mr. Thomas. An act to amend chapter 400 of the Laws of 1880, entitled "An act making appropriations for the several judicial district libraries."

G. O.

446. Introduced by Mr. Spinola. An act to amend an act to consolidate into one act, and to declare the special and local laws affecting public interests in the city of New York, passed July 1, 1882.

447. Introduced by Mr. T. Maher. An act to regulate the sale of intoxicating liquors in the cities of New York and Brooklyn.

448. Introduced by Mr. Bartlett. An act to create an office, to be entitled water commissioners of the city of Binghamton.

449. Introduced by Mr. Bartlett. An act to amend an act entitled "An act to incorporate the city of Binghamton, passed April 9, 1867."

450. Introduced by Mr. Roosevelt. An act to amend an act entitled "An act to consolidate into one act, and to declare the special and local laws affecting public interests in the city of New York, passed July 1, 1882."

451. Introduced by Mr. Hodges. An act to limit the carrying and sale of pistols and other fire-arms in the cities of this State.

452. Introduced by Mr. D. Lindsay. An act to amend an act entitled "An act to extend Flushing avenue, and lay out and improve Flushing avenue and Newtown turnpike road from Broadway to the city lines, and to extend other adjoining streets in the city of Brooklyn, passed May 7, 1868."

453. Introduced by Mr. G. H. Lindsay. An act in relation to the Truant Home of the city of Brooklyn.

454. Introduced by Mr. Bartlett. An act to amend chapter 6 of the Laws of 1881, entitled "An act to organize and establish a police force for the city of Binghamton, as amended by chapter 90 of the Laws of 1881."

455. Introduced by Mr. G. H. Lindsay. An act to authorize the city of Brooklyn to extinguish or purchase certain title to land to be used for a public street.

456. (Senate.) Introduced by Mr. Baucus. An act in relation to the construction of sewers in the city of Schenectady, and to authorize the common council of such city to borrow money for that purpose.

457. Introduced by Mr. Snyder. An act to regulate and fix the toll of the bridge across the Schoharie creek at the village of Esperance, Schoharie county.

458. Introduced by Mr. Townsend. An act to authorize the laying of an iron pipe under the Erie canal and Miller's basin in the city of Utica.

459. Introduced by Mr. Lighton. An act to incorporate the Canal Boat Owners and Commercial Association.

460. Introduced by Mr. Lighton. An act to regulate the charges for elevating and storing in and by floating and stationary warehouses in this State.

G. O.

461. Introduced by Mr. Page. An act to amend an act entitled "An act to revise the statutes of this State relating to banks, banking and trust companies, passed July 1, 1882."

462. (Senate.) An act to enable towns, the territory of which surrounds the city of Binghamton, to hold elections and transact town business in such city.

463. Introduced by Mr. Church. An act to amend an act entitled "An act to amend chapter 268 of the Laws of 1867, entitled 'An act in relation to the collection of taxes, and the sales of land therefor, in certain towns of Queens county.'"

464. Introduced by Mr. Tremper. An act to amend chapter 355 of the Laws of 1879, entitled "An act to establish the compensation of public officers in Ulster county."

465. Introduced by Mr. G. H. Lindsay. An act to amend section 2, chapter 443, entitled "An act to regulate the appointment and compensation of janitors for the armories in the county of Kings."

466. Introduced by Mr. Ferris. An act to authorize the trustees of the village of Waverly, Tioga county N. Y., to compel steam railway companies operating within the limits of said village to employ watchmen at railroad crossings.

467. Introduced by Mr. Murray. An act to repeal chapter 77 of the Laws of 1873, entitled "An act to equalize the representation in the board of supervisors of Fulton county, passed March 13, 1873."

468. Introduced by Mr. G. H. Lindsay. An act to authorize and direct the board of supervisors of the county of Kings to pay the legal services and other expenses incurred by Andrew Zeiser in his contests as commissioners of charities in said county.

469. Introduced by Mr. Snyder. An act to amend, revise and consolidate the several acts relating to the village of Esperance, in the county of Schoharie.

470. Introduced by Mr. Delahanty. An act to empower and direct the board of trustees of the village of West Troy, in the county of Albany, to construct a sewer in Washington street, in said village.

471. Introduced by Mr. Dimmick. An act to amend chapter 726 of the Laws of 1870, entitled "An act requiring the trustees of the village of Port Jervis to drain lands in said village."

472. Introduced by Mr. J. C. Nelson. An act to amend chapter 555 of the Laws of 1864, entitled "An act to revise and consolidate the general acts relating to public instruction."

473. Introduced by Mr. Townsend. An act to amend chapter 534 of the Laws of 1879, entitled "An act for the preservation of moose, wild deer, birds, fish and other game, as amended by

G. O.

chapter 531 of the Laws of 1880, and as amended by chapter 584 of the Laws of 1880."

474. Introduced by Mr. Armstrong. An act for the improvement of the highway between Thompson's Mill and Fort Miller village in Washington county.

475. Introduced by Mr. Helm. An act for the improvement the of Salmon river and a branch of the same, known as Mad river, in the counties of Oswego, Lewis and Jefferson, and to make appropriation.

476. Introduced by Mr. Townsend. An act to amend the Code of Civil Procedure.

477. Introduced by Mr. Cleary. An act in relation to constructing a bridge in the city of Troy.

478. Introduced by Mr. Burns. An act in relation to the publication of calendars and legal notices in the city of Brooklyn and county of Kings.

479. (Senate.) Introduced by Mr. Bowen. An act to amend chapter 555, Laws of 1864, entitled "An act to revise and consolidate the general acts relating to public instruction."

STATE OF NEW YORK.

No. 114.

IN ASSEMBLY,

March 16, 1883.

REPORT

OF THE SUPERINTENDENT OF THE INSURANCE DEPARTMENT IN RESPONSE TO A RESOLUTION REQUESTING INFORMATION CONCERNING AMOUNT PAID BY INSURANCE DEPARTMENT TO POLICY-HOLDERS OF CERTAIN COMPANIES.

STATE OF NEW YORK:

Office of the Insurance Department.
Albany, *March* 15, 1883.

To the Honorable the Assembly, Albany N. Y:

Gentlemen — I have the honor to make the annexed report in response to the resolution of your honorable body, adopted March 8, 1883, in the words following, to wit: "That the Superintendent of the Insurance Department be also requested to report to this Assembly within ten days, what sums of money have been paid by his department to the policy-holders of said companies." (Continental, North America, Guardian Security, Atlantic Mutual, Globe, Eclectic, Widows and Orphan, Reserve Mutual and New York Life Insurance Companies.) Since said last date (May 23, 1882) what dividends have been declared therein, and gross sums paid therein. What fees and expenses have been paid out of the funds in the hands of his department belonging to said companies, and to whom and upon what order paid, and also what funds are yet undivided.

All of which is respectfully submitted,

Very respectfully, your obedient servant,

CHARLES G. FAIRMAN,
Superintendent.

ATLANTIC MUTUAL LIFE INS. CO.— Registered Policy Acct.

Payments from Funds, from March 1, 1882, to March 5, 1883.

Granted at Kingston July 29, 1882.

1882.		
August 5,	Edward Newcomb, receiver for the purpose of paying dividends to policy-holders....	$87,000 00
	W. H. Sprague, repairing done on "Dwight" property, mortgaged to company.......	2 10

Granted at Kingston January 13, 1883.

1883.		
February 1,	Edward Newcomb, receiver for the purpose of paying dividends to policy-holders ...	21,243 55
March 2,	J. I. Wendell, cashier Merch'ts Nat. Bk., Albany, being interest on U. S. Stock due bank.....	225 00

Granted at Albany February 9, 1883.

March 5,	Edward Newcomb, receiver for the purpose of paying dividends to policy-holders.........	88,623 77
		$197,094 42

No balance on said account, in books of department.

ATLANTIC MUTUAL LIFE INS. CO — General Deposit Acct.

No payments from Funds of this company from March 1, 1882, to March 1, 1883.

1883. Balance of cash on hand..........................	$28,438 25
U. S. 6 per cent stock..................................	100,000 00
Total assets to be divided, March 1, 1883..........	$128,438 25

CONTINENTAL LIFE INS. CO.

Payments from Funds, from March 1, 1882, to March 1, 1883.

Granted at Kingston January 28, 1882.

John A. Horan, services as clerk from Jan. 19, 1882, to Feb. 1, 1882..	$40 00
John A. Horan, services as clerk, Feb., 1882	100 00
John B. Fairman, services as clerk, Feb., 1882	100 00
John A. Horan, services as clerk, March, 1882	100 00
James B. Fairman, services as clerk, March, 1882......	100 00
James B. Fairman, services as clerk, April, 1882.......	100 00
John A. Horan, services as clerk, April, 1882	100 00

James B. Fairman, services as clerk, May, 1882	$100 00
William H. McCall, services as clerk, May, 1882	100 00
James B. Fairman, services as clerk, June, 1882	100 00
William H. McCall, services as clerk, June, 1882	100 00
James B. Fairman, services as clerk, July, 1882	100 00
William H. McCall, services as clerk, July, 1882	100 00
James B. Fairman, services as clerk, Aug., 1882	100 00
William H. McCall, services as clerk, Aug., 1882	100 00
James B. Fairman, services as clerk, Sept., 1882	100 00
William H. McCall, services as clerk, Sept., 1882	100 00
James B. Fairman, services as clerk, Oct., 1882	100 00
William H. McCall, services as clerk, Oct., 1882	100 00
E. Wells Sackett and Rankin for Actuary's Reports	36 00
William H. McCall, services as clerk, Nov., 1882	100 00
James B. Fairman, services as clerk, Nov., 1882	100 00
James B. Fairman, services as clerk, Dec., 1882	100 00
James B. Fairman, services as clerk, Jan., 1883	100 00

Granted at Albany December 23, 1882.

H. A. Braunn, for advertising	96 85
Total	$2,372 85
1883. March 1, balance cash in bank	$46,236 02
U. S. bonds on deposit	81,950 00
Assets to be divided March 1, 1882	$128,186 02

ECLECTIC LIFE INSURANCE CO.

Payments from Funds, from March 1, 1882, to March 1, 1883.

Granted January 17, 1880.

Edward Mitchell, attorney for services as special counsel matter of "Wallace Mortgage."	$182 14

Granted at New York City May 10, 1882.

Edward Mitchell, auctioneers fees and attorneys costs, matter of Smyth v. Rowe	733 72

Granted January 17, 1880.

The Argus company, for blank books, "Index Policy-Schedules," matter of company	6 50
	$922 36
1883, March, balance of cash on deposit in bank.. ...	$8,684 78
Bond and mortgage in process of foreclosure (face val.).	40,000 00
Assets to be divided March 1, 1883	$48,684 78

GLOBE MUTUAL LIFE INS. CO.— Genrael Deposit Account.

Payments from Funds from March 1, 1882, to March 1, 1883.

Granted March 16, 1880.

Austin A. Yates, expenses incurred in matter of comp'y.	$7 66
Austin A. Yates, expenses incurred in matter of comp'y.	20 73
The Argus Co. for printing done, matter of company . .	32 50
James A. Brown, services as actuary, matter of company,	550 00
	$610 89

March 1, 1883, balance of cash on deposit in bank......	$21,788 76
U. S. six per cent bonds on deposit.....	100,000 00
Assets to be divided March 1, 1883.	$121,788 76

GUARDIAN MUTUAL LIFE INS. CO.

Payments from Funds from March 1, 1882, to March 1, 1883.

Granted at Albany, April 5, 1880.

John C. Whitney, services as clerk, June, 1882	$208 33
Fred Remington, services as clerk, June, 1882.........	100 00
J. W. Kiernan, services as clerk, June, 1882...........	100 00
L. H. Groesbeck, services as clerk, June, 1882.	100 00
C. C. Van Deusen, services as clerk, June, 1882.......	100 00
J. W. Shelley, services as clerk, June, 1882............	100 00
M. E. Ahern, services as clerk, June, 1882	100 00
David A. Stewart, services as clerk, June, 1882	100 00
L. H. Groesbeck, services as clerk, July 1 to 10, 1882...	30 00
L. H. Groesbeck, services as clerk, part July, 1882	70 00
Fred Remington, services as clerk, July, 1882	100 00
John C. Whitney, services as clerk, July, 1882	208 33
John W. Kiernan, services as clerk, July, 1882	100 00
C. C. Van Deusen, services as clerk, July, 1882	100 00
J. W. Shelley, services as clerk, July, 1882	100 00
M. E. Ahern, services as clerk, July, 1882	100 00
David A. Stewart, services as clerk, July, 1882........	100 00
J. W. Shelley, services as clerk, August, 1882.........	100 00
John W. Kiernan, services as clerk, August 1 to 20, 1882,	66 67
David A. Stewart, services as clerk, August, 1882......	100 00
	$3,083 33

Dividends paid policyholders eight per cent	$9,454 79
1883, March 1, balance of cash on deposit in bank	$5,334 50
Assets to be divided March 1, 1883.	$5,334 50

NORTH AMERICA LIFE INS. CO. — GENERAL DEPOSIT ACCT.

PAYMENTS FROM FUNDS, FROM MARCH 1, 1882, TO MARCH 1, 1883.

Granted January 30, 1880.

William H. Craig, Postmaster, for postage stamps used in matter of company, circulars, etc., to policy-holders	$100 00
Austin A. Yates, expenses incurred in matter of company	7 91
Austin A. Yates, attorney's expenses, incurred in matter of company	7 32
The Argus Co. for letter circulars, pamphlets, used in matter of company	305 10

Granted January 30, 1880.

May 1, 1882. J. C. Whitney, services as clerk during April, 1882	$208 33
F. Remington, services as clerk during April, 1882	100 00
J. W. Kiernan, services as clerk during April, 1882	100 00
L. H. Groesbeck, services as clerk during April, 1882	100 00
J. W. Shelley, services as clerk during April, 1882	100 00
M. E. Ahern, services as clerk during April, 1882	100 00
D. A. Stewart, services as clerk during April, 1882	100 00
C. C. Van Deusen, services as clerk during April, 1882	100 00
Wm. H. Craig, postmaster, for postage stamps used in matter of company	100 00
The Argus Co. for letter circulars used in matter of Co.,	14 50
Sept. 1, 1882. J. C. Whitney, services as clerk during August, 1882	208 33
C. C. Van Deusen, services as clerk during August, 1882	100 00
L. H. Groesbeck, services as clerk during August, 1882	100 00

Sept. 1, 1882.	M. E. Ahern, services as clerk during August, 1882	100 00
	F. Remington, services as clerk during August, 1882	100 00
	J. W. Kiernan, services as clerk during part of August, 1882	33 33
	The Argus Co. for printing circulars	15 00
	J. W. Shelley, services as clerk, Sept. 1882,	100 00
Oct. 1, 1882.	J. C. Whitney, services as clerk, Sept. 1882	208 33
	C. C. Van Deusen, services as clerk, Sept. 1882	100 00
	L. H. Groesbeck, services as clerk, Sept., 1882	100 00
	M. E. Ahern, services as clerk, Sept., 1882,	100 00
	F. Remington, services as clerk, Sept., 1882	100 00
	J. W. Kiernan, services as clerk, Sept., 1882	100 00
	D. A. Stewart, services as clerk, Sept., 1882,	100 00
	J. W. Shelley, services as clerk, Sept., 1882,	100 00
Nov. 1, 1882.	J. C. Whitney, services as clerk, Oct., 1882	208 33
	C. C. Van Deusen, services as clerk, Oct., 1882	100 00
	L. H. Groesbeck, services as clerk, Oct., 1882	100 00
	M. E. Ahern, services as clerk, Oct., 1882,	100 00
	F. Remington, services as clerk, Oct., 1882	100 00
	J. W. Kiernan, services as clerk, Oct., 1882	100 00
	D. A. Stewart, services as clerk, Oct., 1882,	100 00
	J. W. Kiernan, services as clerk, from Nov. 1, to 11, 1882	36 64
	L. H. Groesbeck, services as clerk, from Nov. 1, to 11, 1882	36 64
	M. E. Ahern, services as clerk, from Nov. 1, to 11	36 64
		$4,026 40

Dividends paid to policy holders, 2 per cent	$238 24
March 1, 1883. Balance on deposit in bank (cash)	$46,070 45
U. S. bonds on deposit, par value	20,800 00
Assets to be divided March 1, 1883	$66,870 45

NORTH AMERICA LIFE INS. CO. — REGISTERED POLICY AC'T.

PAYMENTS FROM FUNDS FROM MARCH 1, 1882, TO MARCH 1, 1883.

Granted January 30, 1880.	
Thomas J. Cowell, expense of official envelopes and rubber stamps, matter of company	$99 50
George Cuyler, premium insuring property mortgaged by Mary V. O'Donnell, and husband	22 50
Wm. Lacy & Co., premium insuring property mortgaged by Mary V. O'Donnell and husband	22 50
Granted at Schenectady May 13, 1882.	
Henry R. Pierson, receiver for dividends to policyholders,	111,362 86
Granted January 30, 1880.	
J. S. Bosworth, referee in part payment of referee's fees on foreclosure of mortgage of Mary V. O'Donnell and husband	245 00
J. S. Bosworth, referee in part payment of referee's fees on foreclosure of mortgage of Mary V. O'Donnell and husband	522 93
	$112,275 29
Bonds and mortgages on deposit in process of foreclosure, face value	$38,700 00
Assets to be divided March 1, 1883	$38,700 00

NEW YORK STATE LIFE INS. CO.

PAYMENTS FROM FUNDS FROM MARCH 1, 1882, TO MARCH, 1883.

Granted March 22, 1879.

1882.		
April 1.	J. C. Whitney, services as clerk, March	$208 33
	J. W. Kiernan, services as clerk, March	100 00
	L. H. Groesbeck, services as clerk, March	100 00
	J. W. Shelley, services as clerk, March	100 00
	M. E. Ahern, services as clerk, March	100 00
	D. A. Stewart, services as clerk, March	100 00
	F. Remington, services as clerk, March	100 00
	C. C. Van Deusen, services as clerk, March	100 00

Granted September 22, 1881.

Henry R. Pierson, receiver, in full payment of all dividends to policyholders	$419 55

Granted March 21, 1882.

Waldo & Grover, attorneys, taxable costs, disbursemennts and allowances on foreclosure of mortgages belonging to company	1,246 50

1883.	*Granted March* 22, 1879.	
Jan'y.	Fred Remington, services as clerk, January	100 00
	C. C. Van Deusen, services as clerk, January	100 00
		$2,774 38

Dividends paid policyholders	$38 70

1883, March 1, balance of Cash on deposit in bank	$94 60
Bonds and mortgages in process of foreclosure. face val.	52,885 32
Assets to be divided March 1, 1883	$52,979 92

RESERVE MUTUAL LIFE.

PAYMENTS FROM FUNDS FROM MARCH 1, 1882, TO MARCH 1, 1883.

Granted at Kingston, September 22, 1881.

Henry R. Pierson, receiver for the purpose of paying dividends to policyholders	$1,252 03
J. C. Whitney, services as clerk during May, 1882	208 33
Fred Remington, services as clerk during May, 1882	100 00
J. W. Kiernan, services as clerk during May, 1882	100 00
L. H. Groesbeck, services as clerk during May, 1882	100 00
C. C. Van Deusen, services as clerk during May, 1882	100 00
J. W. Shelley, services as clerk during May, 1882	100 00
M. E Ahern, services as clerk during May, 1882	100 00
D. A. Stewart, services as clerk during May, 1882	100 00
	$2,160 36

1883, March 1, balance cash on deposit in bank	$212 50
Assets to be divided March 1, 1883	$212 50

SECURITY LIFE INS. CO.

PAYMENTS FROM FUNDS FROM MARCH 1, 1882, TO MARCH 1, 1883.

Granted at Kingston, December 13, 1879.

Wm. H. Craig, postmaster, for postage stamps for use of company	$100 00
The Argus Company, expense of circular letters	4 50
Fred. Remington, services as clerk, November, 1882	100 00
C. C. Van Deusen, services as clerk, November, 1882	100 00
J. J. Haggarty, services as clerk part November, 1882	60 00
J. C. Whitney, services as clerk, November, 1882	208 33
Wm. H. Craig, postmaster, for postage stamps for use of company	100 00
J. C. Whitney, services as clerk during December, 1882.	208 33
Fred. Remington, services as clerk during Dec'r, 1882	100 00
C. C. Van Deusen, services as clerk during Dec'r, 1882	100 00
J. J. Haggarty, services as clerk during December, 1882	100 00
Wm. H. Craig, postmaster, for postage stamps for use of company	148 61
J. C. Whitney, services as clerk, January, 1883	208 33
M. H. Hollenbeck, services as clerk, January, 1883	100 00
	$1,638 10
Dividends paid policyholders 4½ per cent	$33,581 26
1883, March 1, balance cash on deposit in bank	$24,121 31
Assets to be divided March 1, 1883.	$24,121 31

WIDOWS AND ORPHANS BENEFIT LIFE INS. CO.

PAYMENTS FROM FUNDS FROM MARCH 1, 1882, TO MARCH 1, 1883.

Granted July 8, 1879.

The Argus Company, printing phamphlets and letter circulars, matter of company	$23 25
Mar. 1. J. C. Whitney, as clerk during February, 1883	208 33
M. M. Hollenbeck, as clerk during Feb'y, 1883	100 00
Fred. Remington, as clerk during Feb'y, 1883	100 00
C. C. Van Deusen, as clerk part Feb'y	40 00
R. E. Van Deusen, as clerk part Feb'y	60 00
	$531 58

Dividends paid policyholders 22 per cent..............	$7,548 92
1883, March 1, balance cash on deposit in bank........	$1,005 76
Assets to be divided March 1, 1883	$1,005 76

STATE OF NEW YORK.

No. 115.

IN ASSEMBLY,

June 30, 1882.

ANNUAL REPORT

OF TRUSTEES OF THE DEVEAUX COLLEGE FOR ORPHAN AND DESTITUTE CHILDREN.

To the Legislature of the State of New York:

The Trustees of DeVeaux College respectfully submit the following general report for the college year ending June 30, 1882.

During the year there have been instructed ten (10) probationers and foundationers, thirty-five (35) boarding and sixteen (16) day pupils, making a total of sixty-one (61) pupils.

On the 30th day of June the funds of the institution consisted of $100,230.21 of principal yielding income. The amount of principal reported is less by $4,800 than that reported June 30, 1881. The proceeds from the sale of two small village lots ($200) have been added to the principal fund, but the "Farm Loan" of $5,000, which first appeared upon the report of September 1, 1880, has been charged to the account of real estate improvement. No encroachments upon the principal have been made during the past year.

The domain of the institution consists of $364\frac{8}{100}$ acres of land, of which $201\frac{49}{100}$ acres are under cultivation. The estimated value of the real estate at present held for sale is $20,000.

The net profits of the operations of the college year amount to $4,215.37.

All of which is respectfully submitted,

By order of the Board of Trustees,

WILFRED H. MUNRO,
Secretary.

DeVeaux College, *September* 19, 1882.

STATE OF NEW YORK.

No. 116.

IN ASSEMBLY,

March 16, 1883.

REPORT

OF COMMITTEE ON PRIVILEGES AND ELECTIONS IN THE MATTER OF THE PETITION OF ISAAC L. VAN VOAST, CLAIMING THE SEAT NOW OCCUPIED BY HON. RICHARD A. DERRICK.

To the Assembly:

Your Committee on Priveleges and Elections, to whom was referred the petition of Isaac L. Van Voast, claiming the seat of Richard A. Derrick as member of Assembly from the second district of Rensselaer county, respectfully report that they have heard the evidence in the case and the arguments of counsel, all of which are before your honorable body, and find as follows:

That the several allegations, specifications and averments set forth in the petition of the said petitioner, Isaac L. Van Voast, pertaining to or affecting the right of the said Richard A. Derrick to the seat now occupied by him, are wholly unsustained by the evidence offered and received. And your committee respectfully recommend the adoption of the following resolution.

Resolved, That Richard A. Derrick is legally entitled to the seat, as member of Assembly from the second district of Rensselaer county, now occupied by him.

All of which is respectfully submitted,

FRANK RICE,
H. S. CLEMENT,
L. C. BARTLETT,
GEO. Z. ERWIN,
THOS. V. WELCH,
LEROY B. CRANE,
WM. CARL ELY,
THEODORE ROOSEVELT,
JOSEPH DELAHANTY.

Dated Albany, *March* 14, 1883.

STATE OF NEW YORK.

No. 117.

IN ASSEMBLY,

MARCH 16, 1883.

REPORT

OF COMMITTEE ON PRIVILEGES AND ELECTIONS IN THE MATTER OF THE PETITION OF WILLIAM E. GREENWOOD, CLAIMING THE SEAT NOW OCCUPIED BY HON. LEMAN HOTCHKISS.

To the Assembly :

Your committee on privileges and elections, to whom was referred the petition of William E. Greenwood, contesting and claiming the seat of Lemon Hotchkiss, as member of Assembly from the second district of the county of Wayne, would respectfully report:

That they have heard the evidence in the case and the arguments of counsel, all of which are before your honorable body ; and find,

That the allegations, averments and specifications contained in the petition of the said petitioner, William E. Greenwood, are unsustained by the evidence in the case offered and received, and respectfully recommend the adoption of the following resolution,

Resolved, That Leman Hotchkiss is legally entitled to the seat as member of Assembly from the second district of the county of Wayne, now occupied by him.

All of which is respectfully submitted,

FRANK RICE,
H. S. CLEMENT,
L. C. BARTLETT,
GEORGE Z. ERWIN,
LEROY B. CRANE,
WILLIAM CARL ELY,
THOMAS V. WELCH,
THEODORE ROOSEVELT,
JOSEPH DELAHANTY.

Dated ALBANY, *March* 14, 1883.

STATE OF NEW YORK.

No. 118.

IN ASSEMBLY,

MARCH 19, 1883.

LIST

OF SPECIAL GENERAL ORDERS.

The Speaker and Clerk, with the consent of the House, referred the following bills to the sub-committee of the whole under Rule 40.

Assembly bill 488, G. O. 365. Introduced by Mr. T. J. Campbell:

An act relative to the office of the commissioner of jurors in the city and county of New York.

Assembly bill 499, G. O. 376. Introduced by Mr. Emans:

An act in relation to unpaid taxes in the towns of the county of Dutchess.

Assembly bill 500, G. O. 377. Introduced by Mr. Bailey:

An act to define the duties and limit the powers of the trustees of the town of Brookhaven, in the county of Suffolk.

Assembly bill 522, G. O. 399. Introduced by Mr. Howe:

An act relating to depositions taken in civil actions or special proceedings of a civil nature, brought or to be brought in courts of record.

Assembly bill 506, G. O. 383. Introduced by Mr. Rice:

An act to amend an act entitled "An act to authorize the trustees of the village of Canandaigua to receive and hold in trust property for the improvement and embellishment of cemeteries held and owned by said village," passed May 2, 1882.

Assembly bill 507, G. O. 387. Introduced by Mr. Hall:

An act to facilitate the payment of highway taxes.

Assembly bill 508, G. O. 388. Introduced by Mr. Geddes:

An act to provide for laying out, altering and improving highways in which two or more towns are interested.

Assembly bill 509, G. O. 389. Introduced by Mr. W. M. Thomson:

An act declaring Bonaparte creek, in the county of Lewis, a public highway.

Senate bill 5, G. O. 5. Introduced by Mr. Thomas:

An act to amend certain sections of the Code of Civil Procedure.

Senate bill 106, G. O. 94. Introduced by Mr. H. A. Nelson:

An act to amend the Code of Civil Procedure.

Senate bill 414, G. O. 302. Introduced by Mr. A. Lansing:

An act to amend the Code of Civil Procedure.

Senate bill 246, G. O. 462. Introduced by Mr. Thomas:

An act to enable towns, the territory of which surrounds the city of Binghamton, to hold elections and transact town business in such city.

Assembly bill 501, G. O. 378. Introduced by Mr. E. A. Maher:

An act for the relief and support of the poor in the several towns in the county of Albany.

Assembly bill 503, G. O. 380. Introduced by Mr. Johnson:

An act to provide for the election of one overseer of the poor in the town of East Chester, Westchester county, and to fix his compensation.

Assembly bill 504, G. O. 381:

An act to amend an act entitled "An act to authorize the appointment of commissioners to fix the grade, and improve the sidewalks, and open and improve streets in the town of New Lots, Kings county," passed April 24, 1872, and known as "chapter 349," Laws of 1872.

Assembly bill 505, G. O. 382. Introduced by Mr. Hard:

An act to amend the charter of the village of Albion.

STATE OF NEW YORK.

No. 119.

IN ASSEMBLY,

MARCH 20, 1883.

LIST OF GENERAL ORDERS.

G. O.

480. Introduced by Mr. Howe. An act to repeal chapter 259 of the Laws of 1882, entitled "An act to provide additional ferry slips and facilitate in New York city for the ferries operated and running between Whitehall street, in the city of New York and the city of Brooklyn."

481. Introduced by Mr. Roche. An act to legalize the official acts of the board of aldermen of Long Island city in the county of Queens.

482. Introduced by Mr. Burns. An act to amend the Code of Civil Procedure.

483. Introduced by Mr. Bartlett. An act to provide for the payment of the salary of the late Ransom Balcom a justice of the Supreme Court.

484. Introduced by Mr. Townsend. An act to amend chapter 140 of the Laws of 1850, entitled "An act to authorize the formation of railroad corporations, and to regulate the same.

485. Introduced by Mr. M. Higgins. An act to present loss of life in cases of the destruction of buildings by fire.

486. Introduced by Mr. E. A. Mahar. An act entitled "An act to provide for the acquisition of title by the United States to lands for light-house purposes and to cede jurisdiction thereof."

487. Introduced by Mr. Miller. An act to make provision in aid of and for the support of certain poor in the city of New York.

488. Introduced by Mr. Bulmer. An act to amend section 1 of chapter 424 of the Laws of 1876, entitled "An act in relation to streets in Long Island city."

G. O.

489. Introduced by Mr. Townsend. An act to amend chapter 314 of the Laws of 1874, entitled "An act to establish a board of police and fire commissioners of the city of Utica."

490. Introduced by Mr. Campbell. An act to facilitate the removal of stable refuse from the city of New York.

491. (Senate.) Introduced by Mr. Titus. An act to amend an act to create a board of commissioners of sewers of the city of Buffalo to define their powers and duties, and to provide means for the construction and maintenance of certain sewers in the city of Buffalo.

492. (Senate.) Introduced by Mr. Baucus. An act to supply the city of Schenectady with water.

493. Introduced by Mr. Clement. An act to amend an act entitled "An act to amend the charter of the village of Saratoga Springs. passed March 26, 1866."

494. Introduced by Mr. Clement. An act to authorize the walling up and covering of the village brook, in the village of Saratoga Springs from a point near the north side of Wake avenue, where the covering now ends to Circular street, and to authorize the filling in, and grading of a portion of Spring avenue in said city.

495. Introduced by Mr. M. C. Murphy. An act to provide for the expenses of the centennial celebration by the mayor, aldermen and commonalty of the city of New York, on the 26th day of November, 1883 (the 25th falling on Sunday), of the evacuation of the city of New York by the British army, on the 25th day of November, 1873, for the due payment thereof.

496. Introduced by Mr. Clapp. An act to authorize and empower the State Board of Audit to hear, audit and determine the claim of Clinton county for money expended in the trial and execution of convict Henry King, for crime committed during his imprisonment in Clinton Prison, and to make award therefor.

497. Introduced by Mr. O'Connor. An act to authorize and empower the State Board of Audit to hear, audit and determine the claim of Chemung county. for moneys expended in the trials of two convicts for murder committed during their imprisonment in the State Reformatory at Elmira, and to make awards therefor.

498. Introduced by Mr. Nichols. An act to provide the building a bridge across the Tonawanda creek on the Tonawanda Indian Reservation, and making an appropriation for the same.

499. (Senate.) Introduced by Mr. A. Lansing. An act to regulate the State Museum of Natural History, and the publication of the palæontology of the State.

500. Introduced by Mr. E. A. Maher. An act to amend section 3 of chapter 379 of the Laws of 1879, entitled "An act prescribing

G. O.

the officers and employees that may be elected, appointed or employed by the Senate and Assembly fixing the salary and compensation thereof, and regulating the proceedings of investigating committees and providing for the expenses thereof."

501. Introduced by Committee on State Prisons. An act to authorize an increased allowance to prisoners upon their discharge from imprisonment.

502. Introduced by Committee on State Prisons. An act to authorize compensation to prisoners for extra work.

503. Introduced by Committee on State Prisons. An act to constitute a commissioner for the purpose of reorganizing the system of prison management and prison labor.

504. Introduced by Mr. G. H. Lindsay. An act entitled "An act to amend chapter 502 of the Laws of 1879, entitled 'An act governing the sale of drugs, medicines and poisons in the county of Kings.'"

STATE OF NEW YORK.

No. 120.

IN ASSEMBLY,

MARCH 21, 1883.

LIST

OF SPECIAL GENERAL ORDERS.

The Speaker and Clerk, with the consent of the House, referred the following bills to the sub-committee of the whole under Rule 40.

Assembly bill 258, G. O. 188. Introduced by Mr. Sweet:

An act to confirm certain sales of lands and real estate for non-payment of taxes in the village of Greenbush in the county of Rensselaer.

Assembly bill 328, G. O. 242. Introduced by Mr. M. C. Murphy:

An act relating to certain dock property in the city of New York.

Assembly bill 377, G. O. 270. Introduced by Mr. Lighton:

An act to provide for lengthening lock number 46 of the Erie canal, and making the appropriation therefor.

Assembly bill 452, G. O. 335. Introduced by Mr. G. H. Lindsay:

An act to amend title 3, chapter 10, article 1, section 1030 of the Code of Civil Procedure.

Assembly bill 471, G. O. 355. Introduced by Mr. Kelley:

An act to enable the trustees of the Boston University to take and hold lands in the State of New York, by devise.

Senate bill 205, G. O. 479. Introduced by Mr. Bowen:

An act to amend chapter 555 of 1864, entitled "An act to revise and consolidate the general acts relating to public construction.

Senate bill 441, G. O. 441. Introduced by Mr. Russell:

An act to provide for an additional number of commissioners to take the acknowledgment or proof of deeds and other written instruments, in other States and Territories, and in foreign States and countries.

Assembly bill 327, G. O. 241. Introduced by Mr. Bartlett:

An act to amend chapter 6 of the Laws of 1881, entitled "An act to organize and establish a police force for the city of Binghamton.

Assembly bill 549, G. O. 412. Introduced by Mr. Van Allen:

An act to amend section 2641 of the Code of Civil Procedure.

Assembly bill 550, G. O. 413. Introduced by Mr. Childs:

An act to legalize the official acts of George W. Hoyt, a justice of the peace in and for the town of Thompson, Sullivan county, N. Y., and authorize him to execute and file his official bond and take and subscribe the official oath.

Assembly bill 551, G. O. 414. Introduced by Mr. House:

An act to prevent the sale of dangerous articles to children.

Assembly bill 490, G. O. 367. Introduced by Mr. Taylor:

An act to amend "An act to amend the charter of the city of Brooklyn, and the various amendments thereof," passed June 28, 1873, and to further amend the charter of the city of Brooklyn.

Assembly bill 432, G. O. 322. Introduced by Mr. Taylor:

An act to alter the commissioners' maps of the city of Brooklyn.

Assembly bill 514, G. O. 394. Introduced by Mr. Snyder:

An act abolishing the office of railroad commissioners in Cobleskill Schoharie county, and providing for the future safety and custody of the railroad stock belonging to such town, and the disposition and application of the dividends which have been, or hereafter shall be, realized and received on such stocks.

Assembly bill 537, G. O. 405. Introduced by Mr. Farrar:

An act to amend chapter 550 of the Laws of 1881, entitled "An act to amend chapter 460 of the Laws of 1879, entitled 'An act to amend chapter 123 of the Laws of 1854, entitled An act to promote medical science.'"

Assembly bill 538, G. O. 406. Introduced by Mr. E. Brooks:

An act to protect the waters of any inland lake of this State.

Assembly bill 547, G. O. 410. Introduced by Mr. DeWitt:

An act to amend the Code of Civil Procedure, and to repeal chapter 813 of the Laws of 1869.

Assembly bill 548, G. O. 411. Introduced by Mr. DeWitt:

An act to amend the Code of Civil Procedure.

Assembly bill 489, G. O. 366. Introduced by Mr. McManus:

An act to provide for the settlement and collection of arrearages of unpaid assessments upon unimproved or vacant lands situate in the city and county of New York.

Assembly bill 491, G. O. 231. Introduced by Mr. J. W. Higgins:

An act to incorporate the Tonawanda Island Bridge Company, for the purpose of constructing and operating a bridge from Tonawanda island to North Tonawanda.

Assembly bill 506, G. O. 383. Introduced by Mr. Rice :

An act to amend an act entitled "An act to authorize the trustees of the village of Canandaigua to receive and hold in trust property for the improvement and embellishment of cemeteries held and owned by said village," passed May 2, 1882.

Assembly bill 508, G. O. 388. Introduced by Mr. Geddes:

An act to provide for laying out, altering and improving highways in which two or more towns are interested.

Assembly bill 425, G. O. 315. Introduced by Mr. Mulholland :

An act to regulate the quality and price of illuminating gas and to provide for the office of meter inspector for the cities of New York and Brooklyn.

Assembly bill 458, G. O. 342. Introduced by Mr. De Witt :

An act to amend the Code of Civil Procedure.

Assembly bill 472, G. O. 356. Introduced by Mr. Kelley :

An act to amend chapter 613 of the Laws of 1875, entitled "An act to authorize the formation of corporations for the safe-keeping and guaranteeing of personal property," as amended by chapter 10 of the Laws of 1877.

Assembly bill 473, G. O. 357. Introduced by Mr. Delahanty :

An act to limit the hours of labor of children, minors and women in all factories where goods are manufactured from raw material, and to appoint an inspector for the enforcement of the same.

Assembly bill 475, G. O. 359. Introduced by Mr. Bartlett :

An act to amend title 11 of chapter 291 of the Laws of 1867, entitled "An act to incorporate the city of Binghamton," and the several acts amendatory thereof.

Senate bill 101, G. O. 443. Introduced by Mr. Thomas:

An act in relation to the use of books belonging to the Sixth Judicial District Library, by the justices of the Supreme Court of such district, and the expenses of transporting the same.

Senate bill 181, G. O. 397. Introduced by Mr. Ellsworth :

An act to provide for the abatement of nuisances injurious to the public health, caused by the overflow or discharge of water from the canals of the State into creeks or water channels.

Senate bill 136, G. O. 350. Introduced by Mr. Grady:

An act to secure inmates of institutions for the care of the poor, freedom of worship.

Senate bill 172, G. O. 384. Introduced by Mr. MacArthur :

An act to amend chapter 683 of the Laws of 1871, entitled "An act amending, revising and consolidating the several acts in relation to the village of Greenbush."

Senate bill 99, G. O. 341. Introduced by Mr. Kiernan:

An act to amend chapter 446 of the Laws of 1874, entitled "An act to revise and consolidate the statutes of the State relating to the care and custody of the insane, the management of the asylums for their treatment and safe-keeping, and the duties of the State Commissioner in Lunacy."

Senate bill 122, G. O. 312. Introduced by Mr. F. Lansing:

An act to amend section 16 of chapter 179 of the Laws of 1856, entitled "An act to provide for a more thorough supervision and inspection of common schools, and further to 'amend the statutes relating to public instruction in the State."

Assembly bill 500, G. O. 377. Introduced by Mr. Bailey:

An act to define the duties and limit the powers of the trustees of the town of Brookhaven, in the county of Suffolk.

Assembly bill 523, G. O. 400. Introduced by Mr. Church:

An act to preserve the purity of elections.

STATE OF NEW YORK.

No. 121.

IN ASSEMBLY,

March 20, 1883.

REPORT

OF THE COMMITTEE ON STATE PRISONS UPON THE CHARGES OF THE NEW YORK STAR AGAINST THE MANAGEMENT OF THE PRISONS OF THIS STATE.

To the Assembly of the State of New York:

The resolutions, in pursuance of which your Committee have investigated the prisons of this State, and now submit their report thereon, are as follows:

Whereas, The New York Star of December 17th, 18th, 19th, 20th, 21st, 22d, 23d, 24th, 25th, 26th and 27th, 1882, charged that a large number of prisoners confined in the prisons of this State lost their lives by brutal and inhuman treatment, and that said brutal and inhuman treatment was brought about by the system of contract labor now in existence in the prisons of this State; therefore, be it

Resolved, That the Committee of this House on Prisons be, and they are hereby, instructed to investigate the charges made by said New York Star, and that they be authorized to send for persons and papers, and report to this House the result of their investigation.

Resolved, That said Committee be further instructed to report to this House, at as early a day as is compatible with the public interests, not, however, to exceed thirty days, the result of their investigations and such recommendations for a change in the existing laws governing the contract labor system as will protect the people of this State.

The active and general interests of the people of the State in the questions presented in the Star articles, render it proper and necessary, in our judgment, to make the investigation thorough and exhaustive. We have accordingly examined a large number of witnesses, including prisoners, discharged prisoners and citizens, and have allowed Michael H. Sigerson, Esq., counsel for the New York Star and for certain of the labor organizations of the State which are seeking the overthrow of the present system of contract labor in our prisons, to appear before us and produce and examine witnesses in support of the charges contained in the Star articles. To serve the convenience of witnesses and insure their attendance, we have held several hearings in the city of New York and at the Sing Sing prison. We have thus taken a large amount of testimony, which, together with our report thereon, we now submit for the consideration of the Assembly.

In reference to the charges contained in the Star articles, viz.: "That a large number of prisoners confined in the prisons of this State have lost their lives by brutal and inhuman treatment, and that such brutal and inhuman treatment was brought about by the system of contract labor," we have no hesitation in saying that in our judgment they are not sustained by the evidence. But we should fail to meet the expectations of the people of this State, and be wanting to the demands of the subject of this investigation, were we to dismiss these charges with only this summary verdict of "Not proven."

Under the general charge of brutal and inhuman treatment a great variety of evils and abuses may be embraced, and although they may not result directly in loss of life, they may be of such kind and degree as to deserve the severest reprehension and the promptest and most effective redress. That evils of this character have existed and still exist in some of the prisons of this State cannot be denied. They are brought to light in the testimony which accompanies this report. It will not destroy, though it may diminish, the weight of this testimony, to say that it is the testimony of convicts. In many instances the circumstances are such that they alone could know the truth; and we do not feel at liberty to dismiss their statements as utterly unworthy of credit, except when the demeanor of the witness, or the character of his evidence, or the contradictory testimony of other witnesses of higher credit, may stamp it as unworthy of belief. With these qualifications in reference to the character of the proofs before us, we are constrained to say that evils of the gravest character have prevailed in some of the prisons of the State, more particularly in the prison at Sing Sing. Prisoners have sometimes been put upon tasks to which they were entirely unequal, and employed in forms of labor for which they had no fitness or adaptation. While the average or standard task may be such as any prisoner of ordinary strength and capacity can perform with ease, it seems to have frequently happened that men were put upon work in which the average task was entirely beyond their power of performance. Failing to perform their tasks, they have, in same instances, been subjected to punishment, and the punishment has diminished their already feeble energies, and made them still less equal to the work required of them. Thus punishment has followed failure, and renewed failure has followed punishment, until the unfortunate prisoner, in utter despair, has refused to work, and been ready to commit some deed of reckless frenzy, even the taking of his own life. Sick men have sometimes failed to receive proper treatment, and have been sent to the work-shop when they should have been sent to the hospital; or the physician has suspected them of shamming disease and sickness, when, in reality, they were ill. Punishments of excessive severity have been inflicted, either from brutality and ungoverned passion in the keeper, or his failure to judge correctly of the endurance, or ill desert of the prisoner. The forms of punishment have sometimes been such as to shock the sensibilities and arouse the indignant protest of the community. Indeed, there is no form of corporal punishment which does not, in a greater or less degree, offend the moral sense of civilized communities, while its power, as a disciplinary agency, is coming to be generally discredited. And we are happy to state that in pursuance of an order of the Superintendent of State Prisons, issued in January last, at the instance of the Governor, paddling, the only form of corporal punishment then in use in the State prisons, has been abolished. While we appreciate the importance of maintaining discipline, and enforcing the faithful performance of the tasks adjudged by the prison authorities to be reasonable, we believe these ends can be best secured by bringing into play a higher class of motives and influences than those of the paddle and rawhide.

The personal clothing, beds, bedding and cell accommodations furnished to prisoners have not always been such as a just regard for the best interests of the prisoners would prescribe. Beds and bedding at the Sing Sing prison were, in many cases, found in an extremely filthy condition; and the cells, according to the testimony of the prisoners, were infested with vermin. In about 250 cells prisoners are doubled up, two being placed in each cell, and this while there are about 600 vacant cells at the Clinton prison and about half that number at Auburn. The excuse for this is that the number of prisoners sentenced from the First and Second Judicial Departments is largely in excess of the number of cells at Sing Sing prison, to which they are required to be in the first instance sent, subject afterward to be transferred, for cause, to Auburn or Clinton. It is also deemed a hardship that prisoners from the First and Second Departments should be sent to prisons so remote as to render it impracticable for their friends to visit them; and it is further claimed that the labor of the prisoners can be best and most profitably employed at Sing Sing. But we cannot discover in these facts any sufficient reason for perpetuating the inhuman and demoralizing custom of *doubling up*, or placing two prisoners in a cell only three feet and four inches wide and about seven feet long.

Further results of this custom are that the air of the cells and corridors soon becomes foul and offensive, and utterly unfit for human beings to breathe; that young offenders have been intimately associated with criminals of the most depraved character, and educated in all the arts and devices of crime, and that all self-respect and all hope of reformation in prisoners been broken down and destroyed.

That these and divers other evils and abuses have at different times existed in some of the prisons of this State, we are forced to admit. Some instances of this character seem to be conclusively established by the evidence, and without this evidence it would be safe to assume that evils of the kind referred to must sometimes be found in the management of our prisons. Among a large number of subordinate officers will always be found some who are either incompetent or willfully neglectful of their duties; and among the superior officers lapses of vigilance will sometimes occur. At the Sing Sing prison, where the greatest abuses were alleged to exist, and where we have found some which call for speedy correction, it appears that the most notable of such abuses occurred under the administration of the former principal keeper, Mr. Patrick H. Bowes. He appers to have carried punishment to the extreme of severity, and not to have been inaccessible to corrupt influences, as the prisoner Haigh readily ascertained on offering him money for an easy position in the prison. We have found, however, no satisfactory proofs of cruelty or undue severity under the present management of that prison. While the officers have, in some respects, been derelict in reference to proper sanitary and police regulations within the prison, especially in reference to the maintenance of cleanliness in the clothing, beds, bedding and cells of the prisoners, we are not blind to the fact that there are serious and well nigh insuperable difficulties to be overcome in the performance of this part of their work. Nearly two-thirds of all the prisoners are employed on the stove contract, and the nature of their work renders it impossible, in the absence of suitable facilities for bathing and for an entire change of clothing on leaving the shop, to maintain an attractive state of cleanliness in the beds, bedding and cells. And we deem it but just to say in this connection, that the warden, Hon. A. A. Brush; the physician, Dr. Hiram Barber; the chaplain, Rev. Silas W. Edgerton, and the principal keeper, Mr. Jesse Dixon appear to be actuated by an intelligent, earnest and humane spirit, and a determination to prevent, so far as possible, any recurrence of the evils and abuses which have prevailed heretofore.

The prisons at Clinton and Auburn, and the penitentiaries at Albany and Brooklyn, so far as cleanliness and adequate sanitary and police regulations are concerned, appear to be entitled to great commendation. We were especially impressed with the general cleanliness, discipline and morale of the Kings County Penitentiary, now and for two years past, under the charge of Warden Green. On entering upon the duties of the office, he abolished all forms of corporal punishment, and has found no difficulty in maintaining order and securing the performance of proper tasks by other and more humane methods of treatment, including additional privileges and a system of rewards for good behavior.

Before leaving this branch of our inquiry, it is proper that we should make mention of the food supplied to the prisoners. A large amount of testimony has been taken on this subject, an examination of which will satisfy the most skeptical that the food is abundant in quantity and suitable in quality, conforming as nearly as possible to the requirement of the statute, that it shall be inferior but wholesome. It also appears that, except on rare occasions, such as might and do occur in any private family, the food is properly prepared.

Having found the general charge of brutal and inhuman treatment unsustained, it would seem to be unnecessary to inquire whether such "treatment was brought about by the system of contract labor now in existence in the prisons of this State." But we have seen that even under the most judicious and humane management, abuses of various kinds are liable to arise, and it is worth our while to consider whether such abuses may not originate in the system of contract labor.

The contract system of prison labor introduces the factor of private pecuniary interest into prison management. The contractor having agreed with the State for the labor of a certain number of prisoners, at a specified sum per day, seeks very naturally and properly to obtain an equivalent in labor for the money he has promised to pay. It is for his interest that the tasks of the prisoners should be fixed at as high a standard as practicable, and that, being once fixed, they should be rigidly exacted. This element of private interest may, it is true, be modified and rendered more or less despotic, according to the temper and spirit which may animate the contractor, his agents and employes, but it cannot be eliminated entirely. Men do not enter into business engagements with each other or with the State from motives of benevolence and charity, but from motives of self interest; and we shall make no mistake if we assume that the gentlemen who now hold contracts with the State for the labor of prisoners are using their best endeavors to render their contracts remunerative. It is urged with truth, however, that the contractors are compelled to accept the judgment of the prison authorities as to the amount of labor that shall be exacted of prisoners, and that they have no power to increase it. This may, in most instances, secure the prisoner against excessive tasks, but it cannot prevent the possibility of errors of judgment in those who fix the tasks, nor determine certainly in all cases the ability of the prisoners to perform them. The ability to labor, especially at mechanical industries, does not depend on so many pounds avoirdupois, or a state of perfect muscular development, or a condition of perfect physical health in the prisoner. His mental organization and moral fibre are also important elements in his capacity for work. The criminal classes are largely made up of men who do not love work, and who have never been accustomed to the forms of labor which are required of them in the prison, and a task which, to an industrious citizen, toiling for the support of his family, would be light and easy, would seem to the prisoner heavy and difficult. There must also be in the experience of prisoners learning a trade a period varying in length with the aptness and docility, or intelligence and good will of the prisoner, during which it will be impossible to graduate accurately his task to his capacity of performance. It should also be considered that the contract system sustains intimate relations to the discipline of the prison, and especially in the matter of punishments. The greater part of punishments are inflicted for failure or refusal to perform the allotted tasks, or for imperfect work. The contractor's foreman decides whether the task is or is not performed, and whether it is or is not properly performed, and reports accordingly to the keeper in charge of the company. The latter reports to the principal keeper, who investigates the case, and determines in conjunction with the prison physician whether the prisoner shall be punished. With these checks and safeguards surrounding the contractors and the prisoners, it probably seldom happens that prisoners are punished unjustly; but that the private interest of the contractor enters as initial factor into the determination of the question of punishment will not be denied. But this is not the only way in which the interest of the contractor stands related to the question of punishment. He must naturally desire that prisoners designated for punishment should be returned to their work as soon as practicable, and that the punishment inflicted should be such as to produce, if possible, instant submission. Thus, the interest of the contractor is best served by the severer forms of corporal punishment, such as paddling or showering, which generally result in prompt submission without seriously impairing the prisoner's ability to resume his work. It may well be urged that the interest of the contractor will be best promoted in the long run by a more humane and considerate treatment of offenders, but self interest is not always far sighted nor true sighted, and it appears in evidence, that at the Kings County Penitentiary contractors have, in one or two instances, insisted upon the form of punishment which will prove most speedily effective, instead of that which operates more slowly and allows an opportunity for the awakening of the prisoner's better nature.

If, now, we are called upon to decide whether in point of fact the contract system has resulted, and does now result, in the infliction of brutal and inhuman punishments, or in any form of brutal and illhuman treatment of prisoners, we are compelled to answer that the evidence taken by us furnishes no proof of the fact; and the conclusion is inevitable that the contract system, as now conducted in our prisons, is so effectually regulated and restrained by the prison authorities that the results which might naturally be expected to flow from it seldom, if ever, appear. It is also due to the contractors and their agents to say that, with the exception referred to, we find no evidence of any disposition on their part to interfere with the proper discipline of the prison, or to impose unreasonable tasks upon the prisoners.

But any discussion of the bearings of the contract system upon the management of our prisons would be narrow and superficial, which should fail to consider its relation to the reformation of the prisoners. In so far as it provides labor for them, reasonable in kind and amount, all will admit that it is beneficient in its purpose. Idleness, whether in prison or out of it, is not a desirable or proper state of lite. Labor, under some form, is confessedly essential to human well being and progress; but the contract system of prison labor is not the only method by which this want can be supplied; and in discussing the reformatory influence of the contract system, it will be necessary to view it, not merely as a means of supplying labor, but as a system sustaining intimate relations to the whole scheme of prison management. The due treatment of this subject will lead us, therefore, to consider what is the proper scope and aim of prison management.

Prisons are established for the protection of society. They are places of restraint for evil doers. We adjudge to confinement therein those who have shown themselves dangerous to the peace and well being of the community; and they are punished, not for what they are, but for what they do; not for being evil-minded, but for being evil-handed. Their punishment is graduated as to its duration, with reference to the gravity of their offense, and not with reference to the reformation of their characters. Their punishment consists simply in the restraint of their personal liberty, with the coarse fare and rude conveniences of prison life. The labor imposed, though technically no part of the sentence, is in no proper sense a punishment, but a beneficient provision of law looking to the good, both of the prisoner and of society; for while it renders his confinement less irksome, and promotes his physical well being and his self respect, it also diminishes the burden resting on the State in the maintenance of its prisons. But the controlling purpose of the State in its treatment of criminals is not the reformation, or the good of the criminal, but the protection of society by the punishment of crime. The State seems not yet to have discovered the fact that society is better protected against a criminal by transforming him into an honest and law abiding citizen, an industrious and useful member of the community, than it can be by confining him within prison walls. And justice is best satisfied, not by vindictive punishments, but by inducing men to become just. Herein, as we believe, lies the true philosophy of all prison management. It should aim at the reformation of criminals, and subordinate to this end all other considerations. The State has indicated its partial apprehension of this truth in the establishment of one reformatory prison, viz., that at Elmira; but our State prisons are still conducted upon the old, though unfortunately not obsolete theory of retributive justice.

Assuming, then that the reformation of offenders is the proper end of prison management, it follows necessarily that all questions relating to prison labor, whether as to its kind or amount, and all questions as to gain or loss to the State in immediate tangible results, must be held to be of secondary importance. If the end to be attained can only be reached by allowing prisoners increased opportunities and facilities for moral improvement and intellectual growth, and by lessening the amount of work required of them, or by granting to such as give proof of sincere amendment and fidelity to their trusts, enlarged privileges and fitting inducements to continued good behavior, then these methods must be adopted, even though the State should suffer pecuniary loss. But the question now arises, can the demands of the contract system of prison labor be made to harmonize with the requirements of this reformatory theory. The contract, in order to be profitable either to the contractor or to the State, must be strictly carried out. As a factor in prison management it must be a fixed and invariable quantity. It can compromise nothing. It can yield nothing to the demands which may be made on behalf of the prisoner. Business is not charity; it knows no law but that of self-interest—a law that gives to every man his own, no matter who is made poor thereby. Under such a law, enforcing every contract for prison labor, it is difficult to see how the ends of a reformatory management can be attained.

Under the contract system, too, the prisoners are brought under a divided control, the control of the State on the one hand and that of the contractors on the other hand, and these do not always agree. The control of the State is, or should be, paternal and reformatory; that of the contractors is, in theory and in fact, purely legal, and looks alone to their business success. Such a conflict of interest and purpose cannot be otherwise than prejudicial to the discipline of the prison and the reformation of the prisoners. The interest of the contractor and the terms of his contract may require that certain prisoners shall be employed at a particular kind of work as long as practicable, while the interest of the prisoner and the proper conditions of his reformation may require that he should be put at a different kind of work, or even that he should be discharged from his imprisonment, either absolutely or conditionally. The interest of the contractor requires that his agents and subordinates in the prison should be selected with reference to their fitness and skill in supervising and directing the particular kind of work to be done under the contract, while the interest of the prisoner and the reformatory ends sought by the State, require that the men who are put in immediate charge of the prisoners, should possess other and higher than mere mechanical and business qualifications.

It is impossible, under the contract system, to classify prisoners as to their moral status or their finess for different kinds of labor. The contract calls, perhaps, for several hundred men to be employed in the manufacture of stoves or hollow ware. Among the hundreds so employed, there must be a large per centage of men whose love of honest, remunerative employment will never be stimulated or strengthened by this form of labor. They will feel their work to be onerous and unsuited to their capacities, if not actually degrading, and will never voluntarily engage in it after their discharge. If put at employment suited to their capacity and peculiar adaptations, and, so far as practicable, to their taste and preference, their self respect might be restored, their love of honest work encouraged, and their purposes of reformation confirmed. Instead of smarting continually under a sense of injustice, and spurning all inducements to the amendment of their lives, as is now too generally the case, they would be made to feel that the State cherishes a genuine kindly interest in their welfare; and unless they can be made to feel that the State, whose laws they have violated, is benign and magnanimous, as well as great and powerful to punish, no genuine desire and purpose to lead a better life can be awakened in them. Mere power cannot subdue and reform the human will, and an exhibition of mere vindictiveness only begets the like spirit in its victims. In order to secure the best reformatory results in prison management it is important that the State should maintain its proper immediate relations with convicted offenders. They should be made to see and feel that they are in direct contact with the sovereign power which they have disobeyed. This may humble, but cannot degrade them. They will respect the majesty of the law. They may defy, but cannot despise it. But the present contract system introduces an intermediary power, and that a purely self-interested and mercenary one, between the prisoner and the State. The labor of the prisoner is let or sold by the State with a view to the largest possible pecuniary profit. The prisoner thus finds himself in the situation of a hireling, not to say a slave, to serve mere mercenary ends, viz., first, the pecuniary interest of the contractor, and, second, the pecuniary interest of the State; and the reformatory design of the prison becomes necessarily a subordinate, and scarcely appreciable feature of its management. In order, therefore, to carry out the reformatory theory of prison management, it seems necessary that the State should materially modify the present system of convict labor, or take immediate supervision of the labor of the prisoners, and employ the same on its own account. Prisoners might thus be assigned to such work as would be most suitable and proper for them, and their tasks could be graduated to meet the requirements of a reformatory discipline. Prisons, instead of being, as now, schools of crime, might become, at least in some limited degree, schools for instruction in useful knowledge and the improvement of the moral faculties.

While, therefore, we fully acquit the present management of our State prisons of the broad charge of brutal and inhuman treatment of prisoners, and of causing the death of prisoners by such treatment; and, also fail to find any evidence that the contract system has except in one or two isolated instances, led to any interference with a humane and judicious administration of the present system of prison discipline; we deem it our duty to say, that this system of labor and discipline, as now established, in our judgment, fails to meet the just demands of a wise and effective prison regime. The standard of judgment in this matter is higher and truer than it was when the present system was adopted. During the last one hundred years criminal laws and penal institutions have undergone a great amelioration. The enlightened public sentiment of to-day is shocked at laws and forms of punishment which a century since awakened no recoil in the popular mind. The time has come when even the criminal classes, or that portion of them who are confined in our prisons, are held to be human beings and entitled to consideration as such; and there is a rising and general demand that our penal institutions shall be administered in harmony with the benign, humanitarian spirit of our advancing civilization.

By the terms of the resolution directing this investigation we are further required to report "such recommendations for a change in existing laws governing the contract labor system as will protect the people of this State." The vagueness of this language leaves us in doubt as to the precise duty imposed upon us, and we are left to interpret it in the light of current discussions in the public press and the evidence produced before us by the parties prosecuting the charges contained in the Star articles. It assumes that the contract system is inimical to the interest of the people of this State, and that some change in the existing laws governing the system is necessary in order to protect their interest. But we are not informed by the language of the resolution in what respect the interest of the people of the State needs to be protected. We shall assume, however, that it is the business and pecuniary interest of the people to which reference is had in the resolution. In the discussion of the question as thus presented it is proper to observe that the contract system, as now carried on, is not claimed to be hostile to the interest of the people at large, but only to such industries as experience the competition of prison labor. The complaint is that a few trades, such as the manufacture of shoes, stoves and hats, have suffered great depression on account of prison competition; and that the burden of sustaining the prisons is thus thrown almost wholly upon these few industries. It is urged in reply that the per centage of prison made goods, even in these trades, is so small as to render the competition scarcely appreciable; but that there is some competition, and that it affects citizen industries to some extent cannot be denied.

" The accomplished and able chief of the Massachusetts Bureau of Statistics of Labor found in 1879 an aggregate of 47,769 persons in the prisons, penitentiaries and reformatories of the United States, whose labor was distributed as follows:

Making agricultural implements	602
boots and shoes	6, 581
brooms	268
brushes	1,010
carpets	175
carriages and wagons	1,251
cigars and tobacco	510
clothing	2,262
fur hats	593
furniture of all kinds	2,884
iron goods	3, 504
laundry work	315
leather and leather goods	787
stoves	1,687
wooden goods	1,120
As farmers and laborers	10,607
In prison duties	4,930
In miscellaneous manufactures	1,036
Idle, sick or infirm	7,647

Of the 40,122 convicts at work, 15,537 were employed as farmers or laborers, generally under the lease system of the Southern States, and in the prison service; leaving only a competing element of 24,585 in manufacturing pursuits in which they were, by the census of 1870, 1,297,611 free persons engaged — a proportion of one convict to fifty-three free workmen, or a little less than two per cent of competition taken as a whole. In a few branches, however, this proportion is exceeded, rising to three and eight-tenths per cent in boot and shoe making, five per cent in the manufacture of brooms, forty per cent in brushmaking and about ten per cent in fur hats. Thus it will be seen that only two trades have any just reason to fear convict competition — the brush business, which requires but a moderate amount of capital, and the manufacture of fur hats, which demands rather more.

Hon. A. S. Meyrick: Princeton review, March, 1883.

The percentage of the number of prisoners engaged in those industries which are carried on in the State prisons of New York, compared with the whole number of free laborers employed in the same industries in the United States, was given in 1880 as follows:

Boots and shoes	2.06
Iron goods	1.10
Hats (including hat and cap makers)	1.73
Laundry work	0.22
Leather and leather goods	0.57

It is further claimed that the evils of this competition are heightened by the fact that prison contractors, in consequence of the low price of convict labor, are able to place their goods upon the market on more favorable terms than can be offered by outside manufacturers; and that this compels the latter to reduce the wages of their workmen in order to compete with the former. The evidence shows the truth of this complaint as to the shoe trade; and that the manufacture of hollow-ware, in this State, has been almost wholly monopolized by prison contractors. As to the stove business, the evidence shows that the prison contractors have uniformly maintained prices instead of lowering them, and that there is a demand for moulders in excess of the supply, notwithstanding the alleged competition. But it is important for many reasons that we should understand whether or not it is true, as claimed, that the price paid by contractors for prison labor is greatly below its fair value. This claim has been urged and reiterated so often that it has come to be generally accepted as true, and we are free to say our previous impressions in favor of its truths were not easily overcome. Our investigations, however, have led us to the conclusion that as a general rule the price paid by the contractor for prison labor is not far from its fair market value. Business men inexperienced in the use of convict labor are generally averse to entering upon any negotiation for it. The atmosphere of a prison is not congenial to them. There are elements of risk, drawbacks, losses and disadvantages in the employment of prison labor with which they are not accustomed to deal, and the force and effect of which they cannot estimate with ordinary certainty. Hence, when the contract of Perry & Co. for the labor of several hundred prisoners at Sing Sing was about to expire, great difficulty was experienced in obtaining bids for its renewal, although the matter was specially brought to the attention of a large number of individuals and firms engaged in that line of manufacture. The contract was finally renewed with Perry & Co. at fifty-six cents, these being the best terms that could be obtained.

The hours of work are ten hours per day from April first to October first, and eight hours per day from October first to April first.

It is claimed by the contractors that this agreement apparently so favorable to them, in reality gives them no advantage over shops where citizen laborers are paid three dollars, or three dollars and a half per day for the same kind of work that is performed by convicts at fifty-six cents per day. Speaking upon this subject the Massachusetts Commissioners appointed in 1880 to investigate the question of convict labor say:

"The disadvantage urged by advocates of the contract system are, short hours for work, interruptions by prison officials for reformatory or other purposes, ignorance, indifference and malice on the part of prisoners, the cost of foremen or instructors, the impossibility of curtailing the working-force during dull seasons, the custom which compels them to take the men as they run, and gives no opportunity for selecting the best workmen, the expense of tobacco which their contract compels them to furnish, the dependence of the contractor on the good will of the warden, who can remove his best help at any time and fill their places with the last recruits from the criminal courts; the necessity of carrying a large stock and large interest account, waste of material and poor work. Summing up all these disadvantages, a contractor claims that it is not possible for him to produce goods more advantageously than he can with free labor, and that the same energy which secures success in prison would be as well, if not better, rewarded outside."

The Connecticut Commissioners corroborate these views (page 29):

"Convicts are constantly changing; those who have become proficient by care on the part of the instructor and effort on their own, are going out, and unskilled men are coming in. Many convicts are in prison for short terms, and almost as soon as they become proficient in work are discharged. The contractor is taking for workmen the worn-out and unskilled, the vicious, and those with little ability and no inclination, and the question is, 'What is the labor worth?' The value of any kind of labor depends upon the quality and quantity, and the rule is, that any marketable commodity will bring what it is worth."

The testimony taken by us and the statements made by contractors confirm these views, and seem to warrant the conclusion that the price paid for convict labor is generally about its fair market value as ascertained by the judgment of intelligent business men; and that the competition complained of is substantially and in effect such as would arise from the establishment of a shop outside, where only citizen workmen should be employed, and where goods equal in quality and quantity should be manufactured and put upon the market at the regular market rates. We submit, however, that in order to avoid any just criticism or complaint in reference to the amount received by the State for convict labor, contracts therefor should be properly advertised and given out to the highest responsible bidder.

But the question still remains, is it just and fair on the part of the State to enter, even in the way and to the extent above mentioned, into competition with its own citizens? If our convicted criminals were in all cases put upon the same work in prison which they have learned and followed outside, there would be no just ground of complaint. There would be no increase of production in any given trade on account of prison labor. But when the State takes several hundred prisoners, who prior to their imprisonment, were following, perhaps, a hundred different occupations, and puts them all at one particular employment, instead of distributing them, as they would be distributed naturally, if free, under the operation of economic laws and their individual preferences, among a large number of industries, a manifest injustice is done to that class of citizen-workmen who experience such competition. The State thus arbitrarily increases the number of producers in certain kinds of business, and forces an increased supply, without creating an increased demand for the goods it throws upon the market. We are told that the total product of convict-labor in the United States is only one-fifth of one per cent of the citizen-labor of the country, and that this per centage is too small to be appreciated in our general system of industry. This may be true so far as the general system is concerned, and if there were nothing but the general system to be considered, if there were no parts to this system, this might be a sufficient answer to the complaint. But the complaint is not that prisoners are required to work and become producers, for no one desires them to be maintained in idleness. The complaint is that in certain branches of industry — certain parts of the general system — there is much more than one-fifth of one per cent of convict labor employed. In the hat trade of the United States, as already shown, ten per cent of the labor employed is convict labor, and in the shoe trade about four per cent. The result is that these industries are embarrassed and sensibly injured. We cannot assent to the proposition that such a policy, on the part of the State, is justified on grounds of political economy, or on any just theory of prison management. It is not equitable that the burden of maintaining our prisons should be thrown wholly upon a few classes industry. The burden should, in strict justice, be borne proportionately by all branches of business, and all classes of property. It appears by the last annual report of the Superintendent of State Prisons, that of the 1,526 persons confined in Sing Sing prison on the thirtieth day of September last, 1,147 were sentenced for crimes against property, 278 for crimes against the person, and 101 for crimes against both person and property. It is right, therefore, that property which enjoys the protection of our criminal laws, and the protection of which costs about four-fifths of all the money expended in maintaining the prisons of the State, should bear the chief share of this expense. If, therefore, by a proper distribution of convict labor among a greater number of mechanical employments, and the consequent reduction of prison competition to a minimum so small as to be unappreciable in any branch of industry, the prison should fail to be self-supporting, and it should become necessary to provide for the deficiency in the general tax levy, the tax-payers of the State would have no just ground of complaint. From the necessities of the case, however, we waive the strict conclusion which we might legitimately draw from the premises we have laid down, viz., that the burden of maintaining the prisons should rest equally upon all who enjoy the protection of our criminal laws. Prisoners must labor; and they must labor at mechanical employments carried on within the inclosure of the prison. But, subject to this limitation, the State is bound, in fairness, to see that trade industries suffer the least possible competition, and that all classes of citizens and property bear their proper share of any deficiency which may arise from a proper modification of the present system of prison contract labor.

With this discusssion of the subjects of inquiry presented in the resolutions, we respectfully submit to the Assembly the following recommendations:

First. That a commission be appointed to take into consideration the whole subject of prison management, particularly the question of prison labor and the proper employment thereof, with a view to the framing of a revised and comprehensive system of prison regulations and prison labor, which shall protect the mechanical and general labor interests of the people of the State against injurious competition, and that the commission report by bill to the next Legislature.

Second. That the faith of the State be scrupulously maintained in the carrying out of all existing contracts for the employment of prison labor, but that the number of prisoners to be employed thereon be reduced to the minimum allowed by the terms of the contract.

Third. That a minute and thorough examination of the State prisons be made by the Superintennent thereof at frequent intervals, with a view to rendering unnecessary the investigation thereof by legislative committees or special commissions.

Fourth. That the warden of each prison be instructed by the Superintendent of State Prisons to institute a careful inquiry into the nature and amount of the tasks required of the prisoners, and, where the tasks are found to be excessive, to reduce the same and establish a reasonable or average standard task for prisoners employed upon each particular kind of work; and that no prisoner, after having been allowed reasonable time to learn the work to which he has been assigned, be continued upon such work unless he shall be found able to perform such average or standard task.

Fifth. That all prisoners who shall show themselves able and willing to perform, with reasonable effort, work in excess of the average or standard daily task, shall be allowed such compensation therefor as may be agreed on between them and the contractor, subject to approval of the warden, the money so earned to be deposited with the warden, subject to the order of the prisoner upon his discharge from imprisonment; provided, however, that where the prisoner has a family dependent on him for support, such earnings, or any part thereof, may, on consent of the prisoner, be paid over to his family, or to some responsible party for their use; and provided, also, that such privilege of earnings for overwork may be temporarily revoked by the warden when the ends of discipline may, in his judgment, require it.

Sixth. That corporal punishment be prohibited in all the prisons of this State, the same being, in our judgment, not only incongruous with the spirit of our civilization, and entirely unnecessary, but actually prejudicial to good discipline and subversive of the reformatory ends of prison management.

Seventh. That prisoners, when assigned to their work, be classified, so far as practicable, according to their character and grade of crime, and that if, at any time, it shall be found necessary to place two prisoners in a cell, special care be exercised to prevent the association of young and comparatively innocent offenders with those who are hardened and expert in crime.

Eighth. That the plan of doubling up, or putting two prisoners in a cell, so long carried on and often with the most shocking and loathsome results, should be prohibited by law; and that the aforesaid commission, if the same shall be appointed, be instructed to inquire and report particularly upon the probable cost and expediency of so enlarging the prison at Sing Sing as to render it suitable for the accommodation of all prisoners sentenced for felonies in the First and Second Judicial Departments.

Ninth. That all prisoners be allowed at stated intervals, at least once a month, to communicate with the Superintendent of State prisons in writing; and that the warden of each prison be directed to provide facilities for the enjoyment of this privilege, all communications so made to be sealed if the prisoner so desires, and subject only to the inspection of the Superintendent and the Governor.

Tenth. That the Superintendent and wardens of prisons be requested and urged to avail themselves of all the powers by law in them vested to effect and maintain in the prisons under their charge, thorough cleanliness in the corridors, cells and all other parts of the prison, and to secure exemption from foul air and the vermin with which many of the cells and beds, as well as the persons of the prisoners are infested; to place movable board floors in all except the punishment cells; to provide suitable facilities for bathing; to see that the persons and clothing of all prisoners are kept in a condition as favorable as possible to health, comfort and proper self-respect; and to cause the walks and grounds within the prison inclosures to be covered with such material as they may deem best suited to the rendering of them dry and free from filth and unwholesome exhalations.

Eleventh. That the Superintendent of State Prisons be requested to take measures for immediate compliance with the requirements of the statute relating to the employment of instructors in the State prisons, and to inform the House whether, in his opinion, any special appropriation of public moneys is necessary for that purpose.

Twelfth. That the accompanying bills relating to compensation for extra work, and the appointment of a prison commission receive the favorable consideration of this House and be enacted into laws.

All of which is respectfully submitted.

E. R. KEYES,
GEO. NORTHUP,
HOMER EMANS,
B. D. CLAPP,
JAMES GEDDES,
JAMES TAYLOR,
W. S. KELLEY,
GODFREY ERNST,
Committee on State Prisons.

Dated *March* 15, 1883.

STATE OF NEW YORK.

No. 122.

IN ASSEMBLY,

March 20, 1883.

MINORITY REPORT

OF THE COMMITTEE ON STATE PRISONS UPON THE CHARGES OF THE NEW YORK STAR AGAINST THE MANAGEMENT OF THE PRISONS OF THIS STATE.

To the Honorable the Assembly of the State of New York:

We, the undersigned members of the Committee on State Prisons, while agreeing with the tone and main features of the foregoing report, desire to make the following additional report:

We believe the State prison at Sing Sing has been mismanaged inasmuch that there has been a total disregard of the healthful and sanitary condition of the said prison, and the prisoners confined therein, owing in a great extent to the fact that the prison rules for cleanliness, not being enforced, and the further fact that the contract-labor system calls for so many men, that there are not sufficient convicts utilized to carry said rules out. The management being carried on with the single idea of making as large a financial showing as possible.

We further believe that Doctor Hiram Barber, the physician in charge at Sing Sing prison is unfitted for the performance of the necessary duties of that position, and should be removed. And that it is prejudicial to the proper management of any prison that agent and warden should be one and the same person; but should be two distinct officers.

While we agree with the wisdom of appointing a commission to report certain facts to the next Legislature, yet we desire to report that from the testimony taken, and other facts, we believe the contract system of convict prison labor is pernicious and against the welfare of the convicts, tending to prevent the reformation of his nature and propenses, and as injurious and unjust to the free industries and the mechanics brought in contract with the system.

And we earnestly recommend that the existing contracts for convict labor should be allowed to run out, and that they should not be renewed; nor any new contracts for convict labor entered into, believing that the State can profitably employ the labor of its convicts. And we further earnestly recommend that a certain portion or margin of the earnings of each convict, over and above the amount necessary for his or her maintenance should be set aside for the support of his or her family, or those dependent upon them when free, or for his or her benefit when they leave the prison. As to the best manner of the State utilizing said convict labor, the proposed commission could ascertain and determine the same, and report to the next Legislature, or long before the existing contracts expire. And in connection with this report, we offer the accompanying bill.

We also wish to say further that the testimony taken by the Committee, convinces us that not only is the sanitary condition of Sing Sing prison to be condemned but also the administration of Warden Brush from the standpoint of humanity. We are convinced that he has countenanced gross cruelties that should not be permitted in any civilized community, and we do not think that he is the man to carry out reformatory measures. Superintendent Baker is also involved to the extent of permitting gross abuses without taking action thereon. The Committee were warranted by the evidence in strongly condemning the manner of enforcing discipline in Sing Sing prison, and on our own responsibility we dissent from the majority report so far as to do so. Further, we would favor the annulment of all existing contracts for convict labor, if such can be legally accomplished, and would recommend inquiry in that direction with a view of discovering some plan through which they can be wiped out.

PATRICK H. ROCHE.
JAMES TAYLOR.
GODFREY ERNST.

Dated *March* 19, 1883.

STATE OF NEW YORK.

No. 123.

IN ASSEMBLY.

MARCH 21, 1883.

REPORT

OF THE SUB-COMMITTEE OF THE WHOLE.

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 325, Printed No. 435, entitled "An act to amend chapter 639 of the Laws of 1881, entitled 'An act to amend section 1 of chapter 537 of the Laws of 1880, entitled 'An act in relation to receivers of insolvent corporations,'" reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Hoag,
Sweet,
Clapp,
Williams,
Nelson, J. C.,
Healy,
Weed,
Price, 11

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 293, Printed No. 402, entitled "An act to legalize the official acts of the school trustees of the town of Gravesend, Kings county," reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Hoag,
Sweet,
Clapp,
Nelson, J. C.,
Healy,
Weed,
Price, 9

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 339, Printed No. 456, entitled "An act to incorporate the Home for the Destitute Children of Suffolk county," reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Hoag,
Sweet,
Clapp,
Nelson, J. C.,
Healy
Weed,
Price,
9

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 235, Printed No. 321, entitled "An act to amend an act entitled 'An act relative to janitors in district courts in the city of New York,' passed May 26, 1880," reported in favor of the passage of the same, with an amendment as follows.

Strike out in line one of the title the words "An act," and insert "chapter 392 of the Laws of 1880."

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell.
Roosevelt,
Hoag,
Sweet,
Clapp,
Nelson, J. C.,
Healy,
Weed,
Price,
10

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 105, Printed No. 158, entitled "An act to incorporate the Oatka Hose Company of Leroy, New York," reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Hoag,
Sweet,
Clapp,
Williams,
Nelson, J. C.,
Healy,
Weed,
Price,
11

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 229, Printed No. 316, entitled "An act to amend chapter 608 of the Laws of 1881, entitled 'An act to amend chapter 3 3 of the Laws of 1871, entitled 'An act to amend title 16, chapter 8, part 3 of the Revised Statutes, relative to proceedings for the draining of swamps, marshes and other low or wet lands, and for the draining of farm lands,' " reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote.

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Hoag,
Sweet,
Williams,
Nelson, J. C.,
Tuttle,
Healy,
Price,
10

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 346, Printed No. 460, entitled "An act to regulate and define the duties of pawn-brokers and fixing a uniform rate of interest for all moneys loaned by them on goods and things in cities having a population of over 300,000 inhabitants," reported in favor of the passage of the same, with amendments as follows:

Strike out all after the enacting clause and insert in lieu thereof the following:

Section 1. No person shall hereafter carry on the business of pawnbroker, in any of the cities of this State, having a population of 200,000 or more, without having first obtained from the mayor of the city where the business is to be carried on a license authorizing such person to carry on the same in the manner and upon the conditions stated in the succeeding section.

§ 2. The mayor of any such city may from time to time grant under his hand and the official seal of his office, to such citizens as he shall deem proper, and who shall also produce to him satisfactory evidence of their good character, license authorizing such citizen or citizens to carry on the business of a pawn-broker, and no person shall carry on the business of a pawn-broker without being duly licensed under the penalty of $100 for each day he or she shall exercise or carry on said business without such license. Any person who loans money on deposit or pledge of personal property or other valuable thing, other than securities or printed evidences of indebtedness, or who deals in the purchasing of personal property or other valuable thing on condition of selling the same back again at a stipulated price, is hereby defined and declared to be a pawn-broker. Any person receiving such license shall pay therefor the sum of $500 for the use of the city yearly, and every such license shall expire one year from the date thereof. Every person so licensed shall at the time of receiving such license file with the mayor granting the same a bond to the local authorities of such city, to be executed by the person so licensed and by two responsible sureties in the penal sum of $10,000, conditioned for the faithful performance of the duties and obligations pertaining to the business so licensed, and the mayor shall have full power and authority to revoke such license for cause.

§ 3. If any person shall be aggrieved by the misconduct of any such licensed pawn-broker, and shall recover judgment against him therefor, such person may, after the return unsatisfied, either the whole or in part, of any execution issued upon said judgment, maintain an action in his own name upon the bond of said pawn-broker, in any court having jurisdiction of the amount claimed, provided such court shall, upon application made for the purpose, grant such leave to prosecute.

§ 4. Every such pawn-broker shall keep a book in which shall be fairly written, at the time of each loan, an account and description of the goods, articles or things pawned or pledged, the amount of money loaned thereon, the time of pledging the same, the rate of interest to be paid on such loan, and the name and residence of the person pawning or pledging the said goods, article or things.

§ 5. Every such pawn-broker shall at the time of each loan deliver to the person pawning or pledging any goods, article or thing a memorandum or note signed by him, containing the substance of the entry required to be made in his book by the last preceding section, and no charge shall be made or received by any pawn-broker for any such entry, memorandum or note.

§ 6. The said book shall at all reasonable times be open to the inspection of the mayor, all judges of the criminal courts, the superintendent of police, police inspectors, captains of police and police justices of such cities, or any or either of them, or of any policeman who shall be duly authorized in writing for that purpose by any or either of them, and who shall exhibit such written authority to such pawn-broker.

§ 7. No pawn-broker shall ask, demand or receive any greater rate of interest than three per cent per month, or any fraction of a month for the first six months, and two per cent per month for each succeeding month upon any loan not exceeding the sum of $100, or than two per cent per month for the first six months and one per cent per month for each succeeding month on any loan exceeding the sum of $100, under the penalty of $100 for every such offense.

§ 8. No pawn-broker shall sell any pawn or pledge until the same shall have remained one year in his possession, and all such sales shall be at public auction and not otherwise, and shall be conducted by one of the licensed auctioneers of the city where the business shall be carried on, and who shall have been previously deputed by such mayor for such purpose.

§ 9. Notice of every such sale shall be published, for at least six days previous thereto, in one or more of the daily newspapers printed in the city where the business shall be carried on, and such notice shall specify the time and place at which such sale is to take place, the name of the auctioneer by whom the same is to be conducted, and a description of the goods or articles to be sold.

§ 10. The surplus money, if any, arising from any such sale, after deducting the amount of the loan, the interest then due on the same, and the expenses of the advertisement and sale, shall be paid over by the pawn-broker to the person who would be entitled to redeem the pledge in case no such sale had taken place.

§ 11. No pawn-broker shall purchase any second-hand furniture, metals, clothing or other article or thing whatever, offered to him as a pawn or pledge, nor shall it be lawful for any such pawn-broker licensed as aforesaid to engage in any second-hand business.

§ 12. All acts or parts of acts inconsistent with the provisions of this act are hereby repealed.

§ 13. This act shall take effect immediately.

Also amend the title so that it will read "An act concerning pawnbrokers."

Said bill was ordered reported by the following vote :

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Hoag,
Sweet,
Clapp,
Williams,
Nelson, J. C.,
Healy,
Weed,
Price,

11

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 259, Printed No. 367, entitled "An act to amend the Code of Criminal Procedure," reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Hoag,
Sweet,
Williams,
Nelson, J. C.,
Tuttle,
Healy,
Weed,
Price,
11

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 201, Printed No. 272, entitled "An act to provide for the construction, care, maintenance, preservation and repair of public bridges over streams or other waters forming the boundary lines of counties, and to apportion the expense thereof," reported in favor of the passage of the same, with amendments, as follows:

To insert as section six, the following:

"The provisions of this act shall not apply to bridges between the county of Westchester and the county of New York." Also, to change section "six" to section "seven;" change section "seven" to section "eight."

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Hoag,
Sweet,
Williams,
Nelson, J. C.,
Tuttle,
Healy,
Weed,
Price,
11

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 308, Printed No. 420, entitled "An act to amend an act entitled "An act in relation to the Weedsport Union School, passed April 14, 1858," reported in favor of the passage of the same, with an amendment, as follows:

Change the title so that it will read:

"An act to amend chapter 212 of the Laws of 1858, entitled 'An act in relation to the Weedsport Union School.'"

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Hoag,
Sweet,
Williams,
Nelson, J. C.,
Tuttle,
Healy,
Weed,
Price,
11

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 364, Printed No. 487, entitled "An act in relation to "independent newspapers," reported in favor of the passage of the same, with amendments as follows:

Section one, line two, before the word "weekly" insert the words "daily or"; line three, strike out the word "five" and insert the word "two"; line four, strike out the word "shall" and insert the word "may"; line five, after the word "and" insert the words "when such designation is made."

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Hoag,
Sweet,
Williams,
Nelson, J. C.,
Tuttle,
Healy,
Weed,
Price,
11

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 261, Printed No. 369, entitled "An act to abolish the office of commissioners for towns of North Dansville, Groveland and West Sparta, in the county of Livingston, as created by chapter 442 of the Laws of 1868, passed April 29, 1868, and to confer the powers and duties of such commissioners upon the supervisors of said towns," reported in favor of the passage of the same, with amendments, as follows:

Strike out section 3:

Change section 4 to section 3. Also amend the title by striking out the words "passed April 29, 1868."

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Hoag,
Sweet,
Williams,
Nelson, J. C.,
Tuttle,
Healy,
Weed,
Price,
11

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 334, Printed No. 451, entitled "An act to establish a uniform standard time throughout the State, and to amend title 1 of chapter 19 of part 1 of the Revised Statutes, relative to the computation of time," reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Hoag,
Sweet,
Williams,
Nelson, J. C.,
Healy,
Weed,
Price,
10

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 249, Printed No. 340, entitled "An act to authorize the Superintendent of Public Works to prevent the further damages to adjacent lands by the filling up of Mill creek in the city of Schenectady," reported in favor of the passage of the same, with an amendment, as follows:

Strike out line one of section one.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Hoag,
Sweet,
Clapp
Williams,
Nelson, J. C.,
Healy,
Weed,
Price,
11

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 349, Printed No. 461, entitled "An act to amend an act entitled 'An act to incorporate the DeVeaux College for Orphan and Destitute Children,'" passed April 15, 1853, reported in favor of the passage of the same, with amendments, as follows:

Section one, line one, strike out the words "the act" and insert "chapter 243 of the Laws of 1853;" lines two and three strike out the words "passed April 15, 1853;" also change the title so that it will read "An act to amend chapter 243 of the Laws of 1853, entitled 'An act to incorporate the DeVeaux College for Orphan and Destitute Children.'"

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Hoag,
Sweet,
Clapp,
Williams,
Nelson, J. C.,
Healy,
Weed,
Price,
11

Mr. Welch, from the sub-committee of the whole, to which was referred the Senate bill, G. O. 343, Printed No. 104, entitled "An act fixing the salaries of stenographers of the Supreme Court in the Eighth Judicial District," reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Hoag,
Sweet,
Williams,
Nelson, J. C.,
Tuttle,
Healy,
Price,
10

Mr. Welch, from the sub-committee of the whole, to which was referred the Senate bill, G. O. 199, Printed No. 114, entitled "An act to amend section 11, title 5, chapter 523 of the Laws of 1870, entitled "An act to incorporate the village of New Berlin, Chenango county, and to repeal its present charter," reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Hoag,
Sweet,
Clapp,
Williams,
Nelson, J. C.,
Healy,
Weed,
Price, 11

STATE OF NEW YORK.

No. 124.

IN ASSEMBLY,

March 21, 1883.

Comptrollers' Office,
Bureau of Canal Affairs,
Albany, *March* 21, 1883.

To the Honorable Alfred C. Chapin, *Speaker of the Assembly :*

Sir—Allow me through you to present to the Assembly the accompanying extract from the minutes of the proceedings of the Canal Board relating to the appointment of collectors of canal tolls.

Respectfully yours.
IRA DAVENPORT.
Comptroller.

REPORT.

At a meeting of the Canal Board, held at the canal department the 21st day of March, in the year 1883.

Present — The Lieutenant-Governor, Secretary of State, Comptroller, Treasurer, Attorney-General, State Engineer and Surveyor.

The Comptroller submitted the following:

To the Honorable the Canal Board:

The statutes provide that the Canal Board shall have power to appoint so many collectors of toll on the canals as they may deem necessary, and to determine the amount of compensation which they shall respectively receive.

In pursuance of this authority and duty collectors have annually been appointed, their official terms commencing with April 1, in one year, and closing March 31 the succeeding year, so that the terms of the present officials will expire with the present month.

There seems to be an impression prevailing that, in consequence of the adoption of the constitutional amendment abolishing tolls, some of the officers heretofore maintained in connection with the administration of the canals will be unnecessary, and hence may be dispensed with.

Among those mentioned is the office of collector of canal tolls. If that officer had heretofore been appointed merely to collect tolls, with no other duties devolving upon him, then the aboliton of tolls would remove all necessity for his services, and leave him with no duty to perform.

It is apparent from the wording of the amendment which was adopted that it was not designed that the canals should be thrown open to the public, like an ordinary highway. The sentence which declares that no tolls shall hereafter be imposed closes with his qualifications; but all boats navigating the canals, and the owner and masters thereof, shall be subject to such laws and regulations, as have been or may hereafter be enacted concerning the navigation of the canals."

The laws and regulations now in force and necessary to govern the conduct of those who navigate the canals; to prevent injury to the structures of the canals, and the obstruction of navigation; and also to furnish the statistical information which the statutes require shall annually be reported to the legislature.

The collectors are therefore required to collect and prosecute for the penalties which the laws and regulations impose for their infraction. These statutes and regulations have not been repealed by the amendment, but are recognized by it and are still in force.

Before a boat is entitled to the privilege of navigating the canals, the statutes require that the collector shall be furnished with satisfactory evidence that she has been registered, or have delivered to him a proper certificate of registry subscribed by the owners, and containing the names of such owners, and their residence.

These registered owners are held responsible by the statutes for all penalties imposed for the improper management of their boats or for any damage which may be done to the structures of the canals by careless navigation. But before a boat can be registered, the law requires that the name and hailing place shall be painted on some conspicuous and permanent part of the outside of the boat; and that the shape of the bow shall conform to the regulations relating thereto, all of which the collector is required to ascertain by personal examination and certify to the facts.

The law requires that every boat navigating the canals shall have a clearance. and such clearance cannot be granted unless the master presents a true bill of lading of all the property constituting the lading of the boat, but before granting such clearance, the collector must first ascertain that the boat does not draw more water than is allowed by the regulations and without this precaution boats will continually be overloading and obstructing navigation.

The statutes further require that the trade and tonnage of the canals shall annually be reported to the legislature, and hence the necessity for the information which can only be derived through the agencies of the bill of lading and clearance.

As about 80 per cent of the entire traffic enters the canals at either their western or eastern terminus and as nearly all the boats clear from one terminus to another, only the terminal offices are really necessary to be maintained. Through the aid of these terminal offices the statistics of all but a small percentage of the traffic may be gathered. The portion which comes from and goes to the Western States and canals and especially that which enters tide water through the canals can be ascertained, and reported in its entirety.

The maintenance of these terminal offices which are, Buffalo, Tonawanda, West Troy and Albany on the Erie Canal, Oswego on the Oswego canal and Whitehall and Waterford on the Champlain canal including the operation of the weigh locks, cost with the last year $25,500, but doubtless the expense can be reduced to $23,000 without impairing the efficiency of the service, provided, competent officers who will devote their entire time to their duties are selected.

In view of the diversity of opinion which have been expressed on the subject it would seem impolitic to appoint collectors unless all doubt as to the legality and propriety of the act shall be removed and some positive assurance given that the appropriation to defray the expense of the service will be continued.

The matter is submitted to the board for its consideration with the suggestion, that speedy action is desirable in order that if collectors are not to be appointed, the offices rented and occupied by the State may be vacated and surrendered by the 31st of March inst., when the leases expire.

Respectfully submitted,
IRA DAVENPORT.
Comptroller.

On motion of Mr. Carr the following resolutions were adopted, to-wit:

Resolved, That the communication of the comptroller relative to the appointment of canal collectors, this day submitted to the board be transmitted to the Leislature, and that the honorable the Legislature be and hereby is respectfully requested to instruct this board with all convenient dispatch as to its views in regard to such appointments or to take such action as it may deem advisable.

Resolved, That the Secretary of the Canal Board transmit the communication of the comptroller with the resolution of this board to the honorable the Legislature.

STATE OF NEW YORK.

No. 125.

IN ASSEMBLY,

March 22, 1883.

REPLY

OF THE CANAL BOARD IN ANSWER TO A RESOLUTION OF THE ASSEMBLY IN REGARD TO THE ALLEGED OCCUPATION OF CANAL LANDS BY THE NEW YORK AND WESTERN RAILROAD COMPANY.

Comptroller's Office, Bureau of Canal Affairs,
Albany, *March* 22, 1883.

Hon. Alfred C. Chapin, *Speaker of the Assembly :*

Sir — I have the honor to transmit herewith, the answer of the Canal Board to the resolution of the Honorable the Assembly, in regard to the alleged occupation of canal lands by the New York and West Shore Railroad Company.

Yours, respectfully,
IRA DAVENPORT,
Comptroller.

At a meeting of the Canal Board, held at the Canal Department, the 21st day of March in the year 1883,

Present — The Lieutenant-Governor, Secretary of State, Comptroller, Treasurer, Attorney-General, State Engineer and Surveyor.

By Mr. Russell :

To the Honorable the Assembly :

The Canal Board, in answer to the resolution of the Assembly in regard to the alleged occupation of the canal lands by railroad companies, beg leave to report,

That they are advised that the State Engineer and Surveyor and Superintendent of Public Works have made full reports upon the subject and a separate communication from this Board would simply duplicate the information therein contained. We assume that information covers the whole subject and respectfully refer the Assembly to those reports. In case further information of this Board is desired it will be readily given, upon request.

Albany, *March* 21, 1883.

Adopted.

STATE OF NEW YORK.

No. 126.

IN ASSEMBLY,

March 22, 1883.

REPORT

OF THE ATTORNEY-GENERAL TO THE ASSEMBLY IN ANSWER TO RESOLUTION OF INQUIRY AS TO CERTAIN INSURANCE RECEIVERSHIPS.

STATE OF NEW YORK:
Office of the Attorney-General,
Albany, *March* 21, 1883.

To the Honorable the Assembly of the State of New York :

I have the honor to acknowledge the receipt of the following resolution adopted by your body on the 8th instant:

"Whereas, A special committee was appointed by the Assembly of 1882, to investigate the management by receivers of the affairs of the insolvent Continental, North America, Guardian, Security, Atlantic, Mutual, Globe, Eclectic, Widows and Orphans, Reserve Mutual and New York State Life Insurance companies, with a view of ascertaining the extraordinary expense made and length of time consumed in the partial settling of the business of those companies, and

Whereas, Such special committee did investigate the affairs of said companies and the expenses of the various receiverships of said companies and on the 23d day of May, 1882, made a report showing great abuses on the part of the receivers of said companies, among which were enormous fees paid to counsel, referees and receivers, extraordinary and unwarranted legislation and procrastination in the settlement of the estates of said companies, therefore

Resolved, That the Attorney-General of the State be and he hereby is requested to report to this Assembly within ten days what has been done and what progress has been made in the settlement of the estates in the hands of the receivers of said companies since on or about the first of March, 1882, also what dividends have been made by said receivers; also what the course of the litigations then pending has been to date with a statement of the suits now pending and the questions involved.

" *Resolved,* That the Superintendent of the Insurance Department be also requested to report to this Assembly within ten days what sums of money have been paid by his department to the policy holders of said companies since said last date; what dividends have been declared thereon and gross sums paid thereon; what fees and expenses have been paid out of the funds in the hands of his department belonging to said companies and to whom and upon what order paid, and also to report what funds are yet undivided."

In reply I beg to communicate the following:

First. In regard to the receivership of the North America Life Insurance Company.

The receiver of this company reports that he has paid out in dividends since March 1, 1882, the sum of $328,739.36; that the property has been substantially converted into cash and that he thinks the trust can be closed within the current year.

The following litigations have been closed since March 1, 1882.

1. An action in the Supreme Court in which Henry R. Pierson, as receiver, was plaintiff against Francis A. Drexel, Nathan J. Drexel, John P. Morgan, Egisto P. Fabbin, J. Hoard Wright and Charles A. Godfrey, defendants. The receiver recovered the sum of $65,000, from the defendants in this action. The defendants' time to appeal has expired.

2. In the Matter of the Attorney-General *v.* The North America Life Insurance Company an appeal from the order passing the receiver's preliminary account was argued in the Court of Appeals. which court decided that the compensation fixed by the Superintendent of the Insurance Department at five per cent at or near the beginning of his administration was premature and invalid. The question was also involved in this appeal as to whether the receiver was entitled to commissions upon premium notes to the amount of upward of $398,000. The Court of Appeals sustained the position taken by the Attorney-General that the receiver was not entitled to such commissions.

3. An appeal from an order of Mr. Justice Landon, taken by Mr. William Barnes was dismissed by the General Term. The question involved was as to whether the valuation of a policy claim should be changed to that of a death claim.

4. An application was made by Mr. Raphael J. Moses, Jr., for compensation for services performed and for disbursements incurred as an intervening attorney. The application was denied at the Special Term and upon an appeal taken from the order denying such motion it was affirmed by the General Term and also by the Court of Appeals, establishing the important doctrine that such trusts are not subject to the payment of counsel fees to intervening attorneys.

5. An appeal was taken from an order of the Special Term denying an application made by Raphael J. Moses, Jr., to compel the receiver to pay to him certain dividends due his clients. The order of the Special Term was affirmed by the General Term.

Second. In regard to the receivership of The Guardian Mutual Life Insurance Company.

The receiver reports that he has paid out in dividends to creditors and policy holders since March 1, 1882, the sum of $47,312.25; that with the exception of three pieces of real estate of little value the property has all been converted into cash and that the affairs of the trust can be closed during the current year.

The following litigations have been closed or are now pending in relation to this trust.

1. An appeal taken by Helen M. Tucker through Messrs. Chamberlain, Carter & Hornblower was argued in the Court of Appeals and decided in favor of the receiver. This was a claim upon a policy of insurance, as to who was entitled to the proceeds thereof.

2. Application was made by the receiver to fix his compensation and an order of the Special Term was granted fixing his compensation at five per cent. An appeal was taken by the Attorney-General on the ground that commissions of receivers in like cases could not exceed those allowed to executors and administrators. The order of the Special Term was affirmed at the General Term and the Attorney-General has appealed to the Court of Appeals where said matter is now pending and awaiting argument.

3. An action is pending in the Supreme Court in New York city in which Henry R. Pierson, as receiver, is plaintiff *v.* Andrew W. Gill and Frederick A. Freeman, defendants. The action was to recover damages for the use by the defendants of trust funds of the Guardian Company to the amount of upward of $200,000, in payment for depreciated stock of the Reserve Mutual Life Insurance Company in order to obtain control of the company and its assets. This action has not been tried.

4. An action is pending in the Supreme Court in behalf of said Pierson, as receiver *v.* Andrew W. Gill to recover moneys of the Guardian Company used by said Gill in payment for the purchase of the stock of the New York State Life Insurance Company which stock was transferred to himself and others. This action has not been tried.

5. An action is pending in the Supreme Court in New York county in which said Pierson is plaintiff and Shepard Homans is defendant to recover from the defendant $10,000, and upwards for moneys received by him out of the trust funds of the Guardian Mutual Life Insurance Company for negotiating for the purchase of the stock of the New York State Life Insurance Company and its transfer to Gill and others. This action has not been tried.

The last three actions are awaiting the result of a litigation brought by Henry R. Pierson, as receiver of the Reserve Mutual Life Insurance Company *v.* Richard A. McCurdy. This action was tried before Mr. Justice Larremore at Special Term and the complaint was dismissed. By an order made by Mr. Justice Landon an appeal has been taken to the General Term from said order and the matter is now pending in said court.

Third. In regard to the receiverships of the Reserve Mutual Life Insurance Company.

The receiver reports that he has paid out in dividends since March 1, 1882, the sum of $2,018.56; that all the property has been converted into cash and he thinks the affairs of the company can be closed within the current year.

The litigations of this trust are as follows:

1. An appeal from the order fixing the receiver's compensation at five per cent has been taken by the Attorney-General to the Court of Appeals in which court it is now pending.

2. The action of Henry R. Pierson, as Receiver, etc., *v.* Richard A. McCurdy, above mentioned. This suit is brought to charge the defendant with upwards of $160,000, of the trust funds of the Mutual Protection Life Assurance Society (now called the Reserve Mutual Life Insurance Company) received by the defendant and disbursed by him in payment for the stock of the Widows and Orphans Life Insurance Company. The complaint in this action was dismissed as above stated, but an appeal has been taken by the receiver from the order of dismissal to the General Term where it is now pending.

3. An action is pending in the Supreme Court in behalf of said Pierson, as receiver, *v.* Simeon B. Chittenden and others. This action is brought to recover from the defendants the moneys paid to them by Mr. McCurdy for Widows and Orphans stock owned and held by them respectively. The amount involved is upwards of $100,000.

4. An action is pending in the Superior Court in behalf of said Pierson, as receiver, *v.* Charles H. Raymond, and is to recover the sum of upwards of $20,000. The action has not been tried, but awaits the decision in the McCurdy case above mentioned.

Fourth. In regard to the receivership of the Widows and Orphans Benefit Life Insurance Company.

The receiver reports that he has paid out in dividends since March 1, 1882, the sum of $42,829.33; that the property has all been converted into cash and he thinks the trust can be closed within the current year.

The litigations pending in regard to this receivership are,

1. The appeal from the order fixing the receiver's fees at five per cent which is now pending in the Court of Appeals and is in the same condition as the Guardian appeal mentioned above.

2. An action is pending in the Supreme Court in behalf of Henry R. Pierson, as receiver, *v.* Andrew W. Morgan and others to call the defendants to account as trustees of the Widows and Orphans Company for assets of that company which they permitted to be misapplied.

An action is pending in the Supreme Court in behalf of Henry R. Pierson, as receiver, *v.* Samuel D. Babcock and others. This action is based upon the same state of facts as Pierson *v.* Morgan, mentioned above. The defendants in the action were trustees of the Widows and Orphans Company, who sold their stock and agreed to the consolidation of the Widows and Orphans with the Mutual Protection Society. The prayer for relief is identical with that in the complaint in Pierson *v.* Morgan.

Fifth. In regard to the receivership of the New York State Life Insurance Company.

The receiver reports that he has paid in money as dividends during the year ending March 1, 1883, the policy holders having been paid in full by the Insurance Department. He thinks the trust can be closed within the current year.

The only litigation affecting this trust is the appeal from the order fixing the compensation of the receiver at five per centum, which is now pending in the Court of Appeals and is in the same condition as the Guardian appeal affecting the same matter mentioned above.

Sixth. In regard to the receivership of the Atlantic Mutual Life Insurance Company.

The receiver reports that he has paid out in dividends to policy holders and creditors since March 1, 1882 the sum of $206,564.56 and that the registered policy holders have been paid in full.

The litigations which affect this trust are as follows:

1. A litigation is now pending between the receiver and Charles Almy upon a question of set-off involving about $2,000. A decision in favor of the receiver was rendered at the last General Term held in the Third Judicial Department, but an appeal has been taken therefrom to the Court of Appeals by Mr. Almy, where the matter is now pending.

2. An appeal has been taken by Mr. William Barnes, an intervening attorney, to the Court of Appeals from a decision of the General Term rendered in favor of the receiver upon the question as to whether a notice of six months to creditors was necessary in order to bar their claims under chapter 902 of the laws of 1869. The receiver and the Attorney-General were respondents at General Term.

An appeal has been taken by Mr. William Barnes to the General Term from a decision and order of the Special Term involving the right to re-value running polices as death claims.

An application is now pending by Mr. William Barnes, for payment of services rendered to the company, after the appointment of the receiver. The application is pending before Mr. Justice Osborne, at Special Term.

5. The final accounting of the receiver is now pending before Mr. Esek Cowen, referee, to determine what sums shall be allowed said receiver for counsel fees, expenses, etc. The reference is nearly closed.

6. An appeal is now pending in the General Term of the Third Department, from an order made by Mr. Justice Follett, on the 17th of October last, refusing to remove at that time the receiver of this company, for the payment of counsel fees without order of the court or notice to the Attorney-General. The appeal was taken by the Attorney-General. It was argued in November, and has not yet been decided.

Seventh. In regard to the receivership of the Globe Mutual Life Insurance Company.

The receiver reports that he has paid policy holders and creditors in dividends, since March 1, 1882, the sum of $1,069,465.09.

The litigations affecting the assets of the corporation now pending are as follows:

1. A claim presented by the receiver against the deposit made by the company in Canada and which was seized by the Canadian authorities after its failure. This claim is now being prosecuted in the Canadian courts in order to determine the question whether the Canadian policy holders shall receive the full amount of the reserve or participate in the distribution on equal terms with the general policy holders.

2. A suit brought by Barbara Hansen against said company in the United States Circuit Court of Iowa upon a policy of $1,000, which the company claims was lapsed. The receiver thinks this will be disposed of within three months.

3. An action in which Annie D. Freeman is plaintiff and James D. Fish, as receiver, is defendant to establish the right of dower. The trial of this suit has been conducted before a referee and has been submitted and now awaits the decision of the referee.

4. A suit in the Superior Court of New York city in which Louis Dryfoos is plaintiff and the Globe Mutual Life Insurance Company is defendant, to recover on a policy of insurance for $10,000.

5. Fish, as receiver, *v.* Joseph Hayward. An appeal from a decree discharging the bondsmen in a foreclosure case. It is now on the Court of Appeals calendar.

6. Fish, as receiver, *v.* James M. Freeman and others. This is an action to foreclose a mortgage for $120,000 which is defended. It is now upon the Special Term calendar and awaits trial.

7. Matter of the claim of J. D. Wells. This is a claim for damages arising out of an alleged breach of an agent's contract. The amount involved is $125,000. The receiver and Attorney-General contested the claim, which was rejected by the Special Term and the General Term of the Supreme Court, and an appeal has been taken to the Court of Appeals where said matter is now pending. The result of this litigation will probably be determined by the decision of a similar question now pending in the Court of Appeals in the matter of the Continental Life Insurance Company

The receiver reports that there are some six or eight similar claims of agents which have been contested that are now pending before a referee, and their decision will follow the course which may be adopted by the Court of Appeals in the case above mentioned.

He also reports that there are now pending before the referee various contested claims upon policies, all of which will be disposed of within sixty days. Within the past year seventy-four claims have been passed upon, approved and reported by the general referee. The net value of these claims is $85,283.74.

Seventy-three claims, aggregating in amount $158,311.13 have after trial before a referee been dismissed.

The following matters have been settled since March 1, 1882.

1. A number of proceedings to vacate assessments upon real estate owned by the defendant company. The result of these proceedings has been to vacate or materially reduce the amount involved. They are finished with three exceptions now on apppeal.
2. Matter of the petition of Joseph M. Emanuel to be released from a purchase.
3. Matter of Eddy petition.
4. Matter of referee's report on registered policies.
5. Matter of the petition of S. W. Knevals.
6. Petition to redeem Melrose property.
7. Petition of William McDermott, referee, for $6,000 fees. This was opposed by the Attorney-General and the petition was withdrawn.
8. Petition of E. R. Mede.
9. Petition of William D. Whiting.
10. Petition of Foster & Thompson.
11. Petition of Lucius McAdam.
12. Petition of William Barnes.
13. Petition of Sewell & Pierce.

The last six were applications for counsel fees as counsel for intervening policy holders. The claims aggregated upwards of $50,000. The matter was referred to Hon. William B. Ruggles and from the order of reference an appeal was taken to the General Term which court held that the Special Term had no authority to grant such an order, as the claims of intervening counsel could not be paid out of the fund. Upon appeal being taken to the Court of Appeals by the intervening counsel the appeal was dismissed.

14. The matter of the reference before Hon. William B. Ruggles.
15. Proceeding to extend time to receive policies.
16. Petition to sell securities.
17. Various proceedings to sell real estate.
18. Application of the Attorney-General to close the trust and to have a final dividend declared.
19. Petition of E. C. James to intervene. This was an application on the part of counsel for claimants representing several hundred thousand dollars for leave to intervene in their behalf. The court at Special Term granted the application, from which determination the receiver and Attorney-General appealed to the General Term where the order was reversed.
20. Proceeding for sale of securities by receiver.
21. Henry I. Magnus *v.* James D. Fish and others.
22. Petition of Edward Higgins.
23. Petition to further extend time to file claims.
24. Matter of the Nunda property.
25. Herman D. Street *v.* James D. Fish, *et al.*
26. Petition of Margaret Kall.
27. Petition of Susan S. B. Duke.
28. Petition of Joseph Herzfeld to admit death claims.
29. Petition of receiver for leave to sell.
30. Petition to re-value certain policies.
31. Petition of Lucius McAdam to admit death claims.
32. Petition for the payment of Cooper, clerk to the referee. This petition was granted by the court at Special Term, from which determination the Attorney-General appealed to the court at General Term where the order was reversed.
33. In the matter of the claim of James A. Mix for breach of contract as agent of said company. The amount involved was about $15,000. The court at Special Term rejected the claim and upon an appeal to the General Term the decision of the Special Term was sustained, after which an appeal was taken by the claimant to the Court of Appeal where the matter was argued by counsel for the claimant for the receiver and by the Attorney-General. The Court of Appeals sustained the rulings of the courts below and established a doctrine which is an important precedent to govern cases of a like character.

The receiver reports that there are sixty-four claims still undecided. There are twenty-five mortgages now under process of foreclosure.

In the opinion of the receiver his trust can be closed within six months. He says it could be closed in a shorter time if there were no delays in having the various cases brought by and against the trust reached in the courts in which they are pending.

The receiver suggests that if a law was passed giving receivers of insolvent life insurance companies the same preference upon the calendars of courts that is now given to receivers of savings banks the closing up of the trusts would be materially facilitated.

Eighth. In regard to the receivership of the Security Life Insurance Company.

The receiver reports that there are no litigations now pending which affect the assets in his hands except his final accounting which is now pending before the referee and awaiting his decision, the case having been finally submitted.

Since March, 1882, the receiver has paid out upon a dividend declared in 1880, the sum of $15,042.10. He is of the opinion that a further dividend of one per cent may be declared.

Ninth. In regard to the receivership of the Eclectic Life Insurance Company.

I am informed that the only assets of this company consist of a mortgage which has been foreclosed during the past year and the premises upon which it was security were sold on the 6th of March instant for the sum of $49,675, subject to payment of costs, taxes and assessments. The title is to be passed on the first of April by the delivery of a referee's deed. Upon the termination of this litigation it is but reasonable to expect that the affairs of this company will be closed as soon as the distribution of the funds can be made by the Superintendent of the Insurance Department.

Tenth. In regard to the receivership of the Continental Life Insurance Company.

The receiver of this company reports that there has been paid to policy holders and creditors since March 2, 1882. the sum of $335,268.70, which was disbursed among about eight thousand persons and that the sum of $15,826.44 has been deposited to secure judgments, etc. The assets of the corporation have been substantially converted into cash.

The litigations affecting the assets are as follows:

1. Claim of Howard L. Jewell as agent for damages sustained by the failure of the company involving $37,445. This claim was decided in favor of the receiver at Special Term and upon appeal the decision of the Special Term was sustained by the General Term from which decision the claimant appealed to the Court of Appeals. It was argued in the Court of Appeals March 20, 1883, by the Attorney-General and counsel for the receiver in opposition to the claim.

2. The matter of the Empire Mutual Life Insurance Company. A proceeding to determine the validity of certain claims made by policy holders against the assets of said company. The General Term affirmed the validity of the claims involved, from which decision an appeal was taken to the Court of Appeals where the matter is now pending.

3. Matter of the claim of Feltwell for $39,028.72 on policies surrendered by the New Jersey Life Insurance Company. This claim was decided in favor of the receiver at Special Term. Upon an appeal by the claimant it was argued at the General Term by counsel for the receiver and the Attorney-General, which court affirmed the order of the Special Term, and an appeal has been taken to the Court of Appeals by the claimant where the matter is now pending.

4. Matter of the claim of Dolmer, Potter & Co., to have a judgment for $6,240.76, which was recovered prior to the appointment of John P. O'Neill as receiver, paid in full as a lien on real estate. It was decided in favor of the receiver at Special Term and upon an appeal to the General Term by the claimants it was argued by the counsel for

the receiver and by the Attorney-General, which court affirmed the order of the Special Term. Thereafter the claimants took an appeal to the Court of Appeals where the matter is now pending.

5. Matter of Elizabeth O. Hoyt upon a claim for a policy involving $1,146.50. It was decided in favor of the receiver at Special and General Terms and is now pending in the Court of Appeals.

6. Claim of Morgan A. Dayton, Jr. This was an application for compensation upon behalf of the executors of the claimant for compensation for services performed by him as referee in the winding up of the trust. The amount involved was $5,662.86. The court at Special Term allowed the claim, whereupon the Attorney-General took an appeal to the General Term, which court reversed the order of the Special Term. An appeal has been taken by the claimant from the order of the General Term to the Court of Appeals where the matter is now pending.

7. Claim of Charles H. Winfield. This was an application to be paid $7,500, for services as referee in the matter of the claim of John J. Anderson, former receiver of the company. Mr. Winfield's claim was referred to a referee for examination and upon the referee's report the Special Term made a decision directing the payment of the amount claimed by the receiver of this company. From this order the Attorney-General appealed to the General Term where it was reversed, whereupon the claimant appealed to the Court of Appeals where the matter is now pending.

8. O'Neill *v.* Montgomery — three cases — two on mortgages ($10,000 and $15,000), and one on agents account ($44,000), all of which are now pending in the General Term, Fourth Department and will be settled by the decision of the Jewell claim by the Court of Appeals.

9. O'Neill *v.* Schenck. This is a foreclosure case. I am not informed as to the status of the litigation.

10. English *v.* O'Neill. This proceeding is now pending in the Court of Appeals.

11. Claim of John J. Anderson. Tried before a referee and is now pending before the Special Term.

12. Matter of the New Jersey Mutual. This will probably be determined by the result of the appeal in the Feltwell case.

13. Claim of William A. Boyd. Argued and submitted for decision.

14. The matter of the accounting of John P. O'Neill and to determine what allowance shall be made his counsel. This is now pending before the referee.

15. Matter of the claim of Wheelock.

16. Wood claim. This has been partially tried and is now pending before a referee.

17. There are now pending before William A. Boyd as final referee two or three hundred claims on polices, agent's claims, etc., which the receiver reports can be brought up and disposed of within a few months.

18. Matter of the claim against the Hope Mutual Life Insurance Company. It is now pending before a referee.

19. Matter of the proceeding of the Insurance Department for distribution of the $10,000, bond. This is also pending before a referee.

20. Claim of W. S. Taylor pending before Edward Mitchell, Esq., referee.

21. O'Neill *v.* J. J. Hallenbeck. Claim for dividends.

22. O'Neill *v.* Wynkoop. Claim for dividends.

23. O'Neill *v.* James B. Colgate. Claim for dividends.

24. O'Neill *v.* W. H. Adams, for moneys received as agent.

25. O'Neill *v.* James McDonald, for moneys received as agent.

26. O'Neill *v.* W. R. Blake, for moneys received as agent.

27. O'Neill *v.* H. H. Hadley, for moneys received as agent.

28. O'Neill *v.* Schweringen, for moneys received as agent.

29. O'Neill *v.* J. C. Thompson, for moneys received as agent.

30. O'Neill *v.* Hinman, action on a note.

31. O'Neill *v.* Swift & Bartlett. Ditto.

32. O'Neill *v.* Rand. Action on account of Empire stock.

33. O'Neill *v.* James C. Pettingill. Action on account of Empire stock.

34. O'Neill *v.* H. B. Pettingill. Ditto.

35. O'Neill *v.* J. O. Kellogg. Ditto.

36. O'Neill *v.* R. Poillon. Ditto.

37. O'Neill *v.* Foote. Ditto.

38. O'Neill *v.* J. J. Hollenbeck. Ditto.

39. O. Neill *v.* I. P. Sanger. Ditto.

40. O'Neill *v.* T. K. Marcy. Ditto.

41. Suit against officers for extra dividends.

42. O'Neill *v.* Lawrence.

43. O'Neill *v.* Cummerford. This is a contested action now pending in Onondaga county.

44. Matter of the Simmonds petition. This has been argued and is now awaiting decision.

45. Matter of Cooper judgment. Argued and awaiting decision.

The following is a schedule of matters in litigation disposed of since March 1, 1882.

1. O'Neill *v.* Luther W. Frost.

2. O'Neill *v.* Same and William Muirhead.

3. Claim of H. L. Jewell. For indemnity for taxes.

4. O'Neill *v.* Smith.

5. O'Neill *v.* Montgomery. (Two cases.)

6. O'Neill *v.* Doty.

7. Matter of Eva Stewart.

8. Matter of claims of intervening attorneys for compensation argued at Special and General Terms and Court of Appeals.

9. Matter of the Ruggles reference.

10. Claim of S. W. Knevals.

11. Claim of A. B. Parker.

12. O'Neill *v.* Seager.

13. Matter of the confirmation of the third general report of William A. Boyd, referee.

14. Application to re-value death claims.

15. O'Neill *v.* Kellogg.

16. Petition of Mr. McAdam to re-value policies by reason of death. Argued at Special and General Terms and Court of Appeals. In this

proceeding the position taken by the receiver and Attorney-General was sustained by each of these courts.

17. Application of Lucius McAdam to alter the valuation of prices. Argued at Special and General Terms and Court of Appeals and the position taken in this proceeding by the receiver and Attorney-General was sustained by each of said courts.

18. Matter of Foland.

19. Application of the Attorney-General to wind up the trust.

20. Matter of the Whiting property.

21. Matter of the confirmation of the fourth general report of William A. Boyd, referee.

22. Petition of William A. Boyd for compensation.

23. Receiver's petition for instructions as to Smith compromise.

24. Petition to confirm sale of real estate.

25. Application to re-value claims on account of death. Argued at Special and General Terms.

26. Application of R. J. Moses to re-value policies by reducing the charge for deferred premiums.

27. Application of receiver to have further dividends declared.

28. Petition to confirm sale of Ensign property.

29. Petition to confirm sale of Bloomfield property.

30. Petition to confirm sale of East Newark property.

31. Petition to confirm sale of Belville avenue property.

32. Claim of E. R. Meade.

33. Petition for instructions as to McCandless claim.

34. Petition to confirm sale of Elizabeth street property.

35. Petition of H. L. Jewell to amend claims.

36. Petition of W. A. Wheelock.

37. Petition to confirm sale of Continental building.

38. Petition for instructions as to Lawrence suit.

39. Matter of Picket property. (Chicago).

40. Petition to require receiver to pay printing disbursements.

41. Petition to confirm sale of Plainfield property.

42. Matter of the confirmation of the fifth general report of William A. Boyd, referee.

43. Receiver's petition to sell certain real estate.

44. Petition to confirm sale of property in Elizabeth, New Jersey.

45. Petition of receiver for instructions in regard to countermanding power of attorney.

46. Matter of deciding certain claims heard before Morgan A. Dayton and other parties. On this application one hundred and three claims against the fund which had been heard before Mr. Dayton and not decided by him were dismissed.

47. Matter of the confirmation of the sixth general report of William A. Boyd, referee.

48. Petition of Edward J. Hanson. This was an application to compel the receiver to complete a sale. The Special Term denied the motion and an appeal has been taken to the General Term where it is now pending.

49. Application to change venue of proceeding to New York county from Albany county. This was denied.

50. Matter of the sale of Matthews property.

51. Receiver's petition for instructions in regard to disputed claims and proceedings thereon. Under this one hundred and thirty-five claims against the fund have been dismissed.

52. Petition of the Evening Post Printing Company.

53. Petition for instructions as to Mitchell compromise.

54. Petition of Chickering.

55. O'Neill *v.* Morgan.

56. Petition in regard to Scribner claim.

57. There have been disposed of since March 1, 1882 before William A. Boyd, Esq., general referee, seven hundred and seventy-seven contested claims which have been disposed of by him as follows:

	Claims.
In his third general report	140
In his fourth general report	91
In his fifth general report	116
In his sixth general report	338
In his seventh general report	92
Total	777

This is exclusive of a number which have been submitted to him and have not been decided.

58. Under a notice given by the receiver in 1882, about one hundred and thirty-five additional claims were dismissed.

The above schedules are substantially what have been furnished to the Attorney-General by the receiver as record of the litigations pending and closed.

The receiver reports that the assets of the corporation have been substantially converted into cash, except those which are affected by the controversies above mentioned.

Upon the assumption of office by the present Attorney-General it became his judgment that a definite system for the more beneficial management of these receiverships should be adopted. It seemed to him that it had at times been forgotten by some in control of the receiverships that the funds of these wrecked companies belonged to the victims of the mismanaged trusts, whose money had created what was left of the property; and that it should be the speedy desire of those who were but the servants of the courts and the State to rightly distribute this property, to accomplish that end with most wholesome regard for the best interests of the silent sufferers whose only reliance was in the just action of the State and the courts in compelling such distribution. To that end he determined upon the following course:

First. That the trusts should be speedily closed and the funds paid to the rightful owners.

Therefore in the more important and pressing cases motions were made for final accountings. Those accountings are now in progress and bid fair to be closed within a few months and nearly two millions of dollars have been paid in dividends.

Second. That the expenses of distributing these funds should be materially lessened.

Therefore it was determined to avoid the employment of counsel to represent the Attorney-General's office and conduct the proceedings on behalf of the State by the Attorney-General in person, or by deputy. without expense to the fund, which has been done. It was also determined to resist the claims of intervening attorneys which would absorb a great deal of the money otherwise to be paid to the policy-holders, and such determination has been justified by the action of the General Term of the Supreme Court and the Court of Appeals in holding that these payments cannot be made. It was also determined that the fees of receivers, referees, and counsel should be diminished, and therefore in every instance where the amounts claimed were disproportionate to the benefits received, such claims have been opposed by the Attorney-General, and so far such opposition has been successful.

Third. That a prolific source of delay should be avoided by the prevention of litigation not useful to the fund.

This kind of litigation has gradually been circumscribed and such action bids fair to aid in the hopeful, speedy end of these trusts.

It is notwithstanding a fact that very many important questions in the management of the distribution of the funds of insolvent corporations were unsolved at the time these receiverships began and the doubts they occasioned have been a fruitful source of delay.

Now, however, almost all of the questions which would ordinarily arise in such litigations have been so finally passed upon by the appellate courts that they stand as beacon marks for the future, in whose lights future receiverships may be safely conducted.

It has been found necessary for the Attorney-General or his deputy to personally attend upon two hundred and thirty applications and arguments in court of which two hundred and one were before the Special Term, twenty-one arguments in the General Term and eight arguments in the Court of Appeals, in the receiverships named in the resolution alone ; and they comprise but a small portion of the receiverships of insolvent corporations ; more might have possibly been accomplished but for the fact that with the other business which the Attorney-General has had to conduct for the State, the limited force in his office has been worked to its fullest capacity.

LESLIE W. RUSSELL,
Attorney-General.

STATE OF NEW YORK.

No. 127.

IN ASSEMBLY,

March 22, 1883.

LIST

OF SPECIAL GENERAL ORDERS.

The Speaker and Clerk, with the consent of the House, referred the following bills to the sub-committee of the whole under Rule 40.

Assembly bill 466, G. O. 371. Introduced by Mr. O'Connor:

An act to provide for the compilation and publication of the journals and records of the military expedition against the Six Nations in the year 1779, under the conduct of Major-General John Sullivan, and for other purposes.

Assembly bill 559, G. O. 423. Introduced by Mr. E. Brooks:

An act to authorize the Staten Island Terminal Railroad Company to transport its passengers and freight by ferry between New York city and Staten Island.

Assembly bill 564, G. O. 428. Introduced by Mr. Crane:

An act to amend chapter 504 of the Laws of 1870, entitled "An act to authorize the construction of a railroad in 125th street, and in certain streets and avenues in the city of New York."

Assembly bill 581, G. O. 449. Introduced by Mr. Bartlett:

An act to amend an act entitled "An act to incorporate the city of Binghamton, passed April 9, 1867."

Assembly bill 365, G. O. 257. Introduced by Mr. Earl:

An act to ratify and confirm a written lease and agreement between the Yates Avenue and Flatbush Railroad Company and the Broadway Railroad Company of Brooklyn.

Assembly bill 366, G. O. 258. Introduced by Mr. Earl:

An act to ratify and confirm all proceedings had by the Yates Avenue and Flatbush Railroad Company, and the Broadway Railroad Company of Brooklyn, or either of them, purporting to be in pursuance of the provisions of an act entitled "An act in relation to railroads held under lease," passed April 3, 1867, and the acts amendatory thereof.

Assembly bill 469, G. O. 353. Introduced by Mr. E. Brooks:

An act to authorize the Comptroller of the State of New York to adjust and settle claims due the State from the several counties thereof.

Assembly bill 476, G. O. 360. Introduced by Mr. Delahanty:

An act to amend an act entitled "An act to incorporate the city of Cohoes," passed May 19, 1869, and the acts amending the same.

Assembly bill 568, G. O. 433. Introduced by Mr. O'Connor:

An act entitled "An act to amend chapter 516 of the Laws of 1836, entitled 'An act to incorporate the Elmira Mechanics' Society, as amended by chapter 170 of the Laws of 1869."

Assembly bill 570, G. O. 435. Introduced by Mr. Keyes:

An act to confirm and legalize the acts of Isaac N. Mills as notary public of the county of Westchester, since the 30th day of March, 1882.

Assembly bill 571, G. O. 436. Introduced by Mr. Clarke:

An act in relation to stenographers in the District Courts in the city of New York.

Assembly bill 573, G. O. 438. Introduced by Mr. H. D. Nelson:

An act to amend section 3053 of the Code of Civil Procedure.

Assembly bill 575, G. O. 440. Introduced by Mr. Howland:

An act to legalize the official acts of Frederick H. Kennedy, a justice of the peace in and for the city of Auburn, in the county of Cayuga.

Assembly bill 554, G. O. 418. Introduced by Mr. E. Brooks:

An act supplementary to chapter 737 of the Laws of 1873, entitled "An act in relation to the creation and formation of water-works companies in towns and villages of the State of New York."

Assembly bill 555, G. O. 419. Introduced by Mr. Cary:

An act entitled "An act relating to certain contracts for the lease or conditional sale of railroad equipment and rolling stock, and providing for the record thereof."

Assembly bill 558, G. O. 422. Introduced by Mr. Bailey:

An act to amend an act entitled "An act to authorize David S. S. Sammis to establish and to continue a ferry across Fire island or Great South bay, from the village of Babylon to Fire Island beach in the county of Suffolk, passed March 25, 1873."

Assembly bill 561, G. O. 425. Introduced by Mr. G. H. Lindsay:

An act to amend chapter 319 of the Laws of 1848, entitled "An act for the incorporation of benevolent, charitable, scientific and missionary societies."

Assembly bill 524, G. O. 401. Introduced by Mr. M. C. Murphy:
An act to amend section 702 of the Penal Code.

Assembly bill 525 G. O. 402. Introduced by Mr. M. C. Murphy:
An act to amend sections 209 and 212 of the Code of Criminal Procedure.

Assembly bill 546, G. O. 409. Introduced by Mr. Howe:
An act for the relief of the Leake and Watts Orphan House in the city of New York.

Assembly bill 553, G. O. 417. Introduced by Mr. Quinn:
An act for the protection of buyers of certain fermented liquors by the keg, cask, barrel or hogshead.

Assembly bill 436, G. O. 327. Introduced by Mr. McCarren (by request):
An act to reorganize the board of education in the city of Brooklyn.

Assembly bill 457, G. O. 340. Introduced by Mr. M. C. Murphy:
An act to designate Monday, the 26th day of November, 1883, to be observed as a public holiday in the city and county of New York.

Assembly bill 463, G. O. 395. Introduced by Mr. Page:
An act to establish a board of trustees in the city of New York for parishes in foreign countries of the Protestant Episcopal Church in the United States of America.

Assembly bill 383, G. O. 275. Introduced by Mr. Roche:
An act setting apart and reserving pier 37, East river, in the port of New York, for certain purposes.

Assembly bill 417, G. O. 305. Introduced by Mr. Burns:
An act to enable the board of education of the city of Brooklyn to sell lands not needed for school purposes.

Assembly bill 432, G. O. 322. Introduced by Mr. Taylor:
An act to alter the commissioners' maps of the city of Brooklyn.

Assembly bill 433, G. O. 323. Introduced by Mr. Cary:
An act to amend chapter 409 of the Laws of 1882, entitled "An act to revise the statutes of this State relating to banks, banking and trust companies."

Assembly bill 434, G. O. 324. Introduced by Mr. Cary:
An act to amend section 260 of chapter 419 of the Laws of 1882, entitled "An act to revise the statutes of this State relating to banks, banking and trust companies."

Assembly bill 587, G. O. 455. Introduced by Mr. G. H. Lindsay:
An act to authorize the city of Brooklyn to extinguish or purchase certain title to land to be used for a public street.

Senate bill 61, G. O. 54. Introduced by Mr. F. Lansing:
An act to amend the Code of Civil Procedure.

Senate bill 71, G. O. 64. Introduced by Mr. H. A. Nelson:
An act to amend the Code of Civil Procedure.

Senate bill 38, G. O. 36. Introduced by Mr. H. A. Nelson:
An act to amend the Code of Civil Procedure.

Assembly bill 580, G. O. 448. Introduced by Mr. Bartlett:
An act to create an office, to be entitled water commissioner of the city of Binghamton.

Assembly bill 583, G. O. 451. Introduced by Mr. Hodges:
An act to limit the carrying and sale of pistols and other firearms in the cities of this State.

Assembly bill 584, G. O. 452. Introduced by Mr. D. Lindsay.
An act to amend an act entitled "An act to extend Flushing avenue, and lay out and improve Flushing avenue and Newtown turnpike road from Broadway to the city lines, and to extend other adjoining streets in the city of Brooklyn, passed May 7, 1868."

Assembly bill 585, G. O. 453. Introduced by Mr. G. H. Lindsay:
An act in relation to the Truant Home of the city of Brooklyn.

Assembly bill 586, G. O. 454. Introduced by Mr. Bartlett:
An act to amend chapter 6 of the Laws of 1881, entitled "An act to organize and establish a police force for the city of Binghamton, as amended by chapter 90 of the Laws of 1881."

Assembly bill 230, G. O. 243. Introduced by Mr. Titus:
An act to amend section 333 of the Code of Civil Procedure.

STATE OF NEW YORK.

No. 128.

IN ASSEMBLY,

March 22, 1883.

LIST OF GENERAL ORDERS.

G. O.

505. Introduced by Mr. Hoyt. An act to amend chapter 285 of the Laws of 1879, entitled "An act to establish the compensation of the county judge and surrogate of Lewis county."

506. Introduced by Mr. Cleveland. An act to legalize a vote passed at the annual town meeting in the town of Milo, Yates county.

507. Introduced by Mr. Ely. An act to provide for the taxation of real estate subject to mortgage.

508. Introduced by Mr. Townsend. An act to amend chapter 319 of the Laws of 1848, entitled "An act for the incorporation of benevolent, charitable, scientific and missionary societies, and the several acts amendatory thereof."

509. Introduced by Mr. Campbell. An act to require the registering of formation of general partnerships.

510. Introduced by Mr. H. D. Nelson. An act to promote and encourage the planting of forests.

511. Introduced by Mr. Erwin. An act in relation to telegraph companies, and to prevent the consolidation of competing telegraph lines.

512. Introduced by Mr. Bulmer. An act in relation to the Long Island City and Calvary Cemetery Railroad Company, and the Long Island City and Maspeth Railway Company.

513. (Senate.) Introduced by Mr. H. A. Nelson. An act to amend chapter 108 of the Laws of 1875, entitled "An act in relation to railroad companies."

514. (Senate.) Introduced by Mr. Evans. An act in relation to care

G. O.

on short railroads, and having tracks of two gauges and not entering the limits of any incorporated cities.

515. Introduced by Mr. E. Brooks. An act authorizing a bridge across the kiln or sound west of Staten Island.

516. Introduced by Mr. Williams. An act to amend chapter 482 of the Laws of 1862, entitled "An act to provide for the collection of the demands against ships and vessels, passed April 24, 1862."

517. Introduced by Mr. Donohue. An act to amend chapter 232 of the Laws of 1854, entitled "An act for the incorporation of companies formed to navigate the lakes and rivers, passed April 15, 1854."

518. Introduced by Mr. Tremper. An act to repeal chapter 348 of the Laws of 1879, entitled "An act to establish the compensation of county judge and surrogate of Ulster county."

519. Introduced by Mr. Howland. An act to amend chapter 451 of the Laws of 1874, entitled "An act to amend the several acts in relation to State prisons."

520. Introduced by Mr. Bartlett. An act reappropriating money for the erection of a military storehouse in the city of Binghamton.

521. Introduced by Mr. Cady. An act to appropriate money for the payment of three several awards made by the Canal Appraisers in favor of Sanford Hoff, Ira C. Brockwell, Samuel D. Lawler and John J. Gleason.

522. (Senate.) Introduced by Mr. Pitts. An act making an appropriation for the payment of an award made by the State Board of Audit in favor of the Western House of Refuge.

523. Introduced by Mr. Johnson. An act to amend section 1533 of the Code of Civil Procedure.

524. Introduced by Mr. Crane. An act to amend section 3210 of the Code of Civil Procedure.

525. Introduced by Mr. Mulholland. An act to provide for the appointment of sealers of weights and measures in the city of Brooklyn.

526. Introduced by Mr. W. H. Thompson. An act to amend the Code of Civil Procedure.

527. Introduced by Mr. Weed. An act to amend chapter 349 of the Laws of 1877, entitled "An act to provide for the payment of bonds issued by municipal corporations, under the provisions of chapter 907, Laws of 1869, entitled 'An act to amend an act entitled An act to authorize the formation of railroad corporations and to regulate the same, passed April 2, 1850, so as to permit municipal corporations to aid in the construction of railroads, and the acts amendatory thereof.'"

G. O.

528. Introduced by Mr. Miller. An act to amend chapter 542 of the Laws of 1880, entitled "An act to provide for raising taxes for the use of the State upon certain corporations, joint-stock companies and associations, and the acts amendatory thereof."

529. (Senate.) Introduced by Mr. F. Lansing. An act to amend the Code of Civil Procedure.

530. (Senate.) Introduced by Mr. H. A. Nelson. An act to amend the Code of Civil Procedure.

531. (Senate.) Introduced by Mr. H. A. Nelson. An act to amend the Code of Civil Procedure.

532. Introduced by Mr. Crane. An act for the appointment of commissioners to select and locate lands for public parks in the 23d and 24th wards of the city of New York, in the vicinity thereof.

533. Introduced by Mr. Taylor. An act to allow police captains or officers in charge of the several precincts of the city of Brooklyn to charge for making out bail bonds.

534. Introduced by Mr. Henry. An act in relation to the common council of the city of Brooklyn.

535. Introduced by Mr. Sheridan. An act to amend chapter 253 of the Laws of 1877, entitled "An act to amend chapter 107 of the Laws of 1877, entitled 'An act in relation to the Superintendent of State Prisons, and for the more efficient and economical management of State prisons.' "

536. Introduced by Mr. Campbell. An act relative to common schools in the city of New York.

537. Introduced by Mr. Hodges. An act relative to the time of payment of obligations hereafter to be issued by the city of Brooklyn.

538. Introduced by Mr. E. A. Maher. An act to provide for the construction of a bridge at East Exchange street, in the city of Albany.

539. Introduced by Mr. Clarke. An act regulating the sale of real estate in the city of New York.

540. Introduced by Mr. Clarke. An act to amend chapter 410 of the Laws of 1882, entitled "An act to consolidate into one act and to declare the special and local laws affecting public interests in the city of New York."

541. Introduced by Mr. Clarke. An act to amend section 153 of chapter 410 of the Laws of 1882, entitled "An act to consolidate into one act, and to declare the special and local laws affecting public interests in the city of New York."

542. Introduced by Mr. Earl. An act for the better security of mechanics, laborers and others who perform labor or furnish ma-

G. O.

terials for building, and other improvements on lands in the city of Brooklyn.

543. (Senate.) Introduced by Mr. Pitts. An act to amend chapter 58 of the Laws of 1882, entitled "An act to amend chapter 482 of the Laws of 1875, entitled 'An act to confer on boards of supervisors further powers of local legislation and administration, and to regulate the compensation of supervisors.'"

544. Introduced by Mr. Smith. An act for the preservation and dedication to public use of the upper lock of the Old Inland Lock Navigation Company at Little Falls and the old stone bridge adjacent.

545. Introduced by Mr. Townsend. An act in relation to incorporated villages.

546. Introduced by Mr. Hawley. An act authorizing the Young Men's Association of the city of Buffalo to acquire an additional property.

547. Introduced by Mr. Schwarz. An act to repeal chapter 256 of the Laws of 1881, entitled "An act concerning charitable, benevolent and beneficiary associations, societies and corporations."

548. Introduced by Mr. J. F. Higgins. An act to provide for the taxation of life insurance companies.

549. (Senate.) Introduced by Mr. Covert. An act to amend chapter 392 of the Laws of 1882, entitled "An act to incorporate the German American Loan and Trust Company of New York."

STATE OF NEW YORK.

No. 129.

IN ASSEMBLY,

March 22, 1883.

LIST OF GENERAL ORDERS.

G. O.

552. Introduced by Mr. DeWitt. An act to amend section 1269 of the Code of. Civil Procedure.

553. (Senate.) Introduced by Mr. MacArthur. An act to fix the place in which certain property shall be assessed and granting relief in cases of assessment in two places.

554. (Senate.) Introduced by Mr. Titus. An act authorizing the Young Men's Association of the city of Buffalo to acquire additional property.

555. (Senate.) Introduced by Mr. Jacobs. An act relative to the time of payment of obligations hereafter to be issued by the city of Brooklyn.

556. An act to authorize towns to purchase stone crushers and engines for the purpose of macadamizing the highways.

557. Introduced by Mr. J. Murphy. An act to prevent the use of drugs and substitutes for barley, malt and hops in the manufacture, brewing and sale of ale, porter, beer, lager beer and other fermented liquors.

558. Introduced by Mr. Bliss. An act for the proper protection of domesticated animals during disease and for the further advancement of veterinary science.

559. Introduced by Mr. Berry. An act concerning the grounds, buildings and property of religious corporations, the custody, protection and preservation of the same and the powers of trustees in relation thereto.

560. (Senate.) Introduced by Mr. H. A. Nelson. An act to amend chapter 298 of the Laws of 1882, entitled "An act to incorporate the Vassar Brothers Hospital in the city of Poughkeepsie.

G. O.

561. (Senate.) Introduced by Mr. Kiernan. An act to extend the operation and effect of chapter 40 of the Laws of 1848, entitled "An act to authorize the formation of corporations for manufacturing, mining, mechanical or chemical purposes."

562. (Senate.) Introduced by Mr. Bowen. An act to amend chapter 613 of the Laws of 1875, entitled "An act to authorize the formation of corporations for the safe-keeping and guaranteeing of personal property."

563. Introduced by Mr. Odell. An act to authorize the Highland Trans-Hudson Railroad Company to construct and operate a bridge across the Hudson river.

STATE OF NEW YORK.

No. 130.

IN ASSEMBLY,

March 21, 1883.

REPORT

PRESENTED BY MR. ROGERS, OF SENECA, TO THE COMMITTEE ON AGRICULTURE, AND ADOPTED BY THAT COMMITTEE AS A REPLY TO A RESOLUTION INTRODUCED BY MR. E. BROOKS OF RICHMOND, AND PASSED FEBRUARY 1, 1883, IN REGARD TO THE PRESERVATION OF THE FORESTS OF THE STATE.

Assembly Chamber,
Albany, *February* 2, 1883.

Mr. Erastus Brooks, of Richmond, introduced the following, which was adopted:

Resolved, That the committee on agriculture examine and report to the Assembly, at their earliest practical convenience, upon the subject of some positive legislation for the protection of the forests and trees of the State from destruction, and that they also report upon the like subject in the form of an appeal in behalf of the preservation of the forests of the country to the Congress of the United States. The object of this inquiry being to arrest and prevent the widespread practice of denuding the land of a continued growth of trees and forests which are essential to the preservation of the health, comfort and safety of the people of the State and country.

The committee on agriculture, in reply to the foregoing resolution, respectfully report as follows:

The protection of forests, as a means of preserving the flow of water in the various streams of a country, is doubtless the most interesting and important subject that could come before this or any other Legislature. It is a subject pre-eminently worthy of the wisest counsels and the most profound and lofty consideration, and as such has recently attracted the attention of the most learned and scientific men in this, and nearly every European country. No doubt the best interests of this State, including especially her great commercial, manufacturing and sanitary interests, have already been seriously threatened by its too long neglect, and its consideration now has not come any too soon. To neglect it any longer would be a most serious crime for which there could be no possible or reasonable excuse. Whatever is done, therefore, should be done promptly and at once. The experience of Europe, during the past quarter of a century, where death and devastation have followed the unprecedented floods that have annually visited the various sections of that country, should prove an everlasting warning, not only to the State of New York, but to the entire American people. The terrible loss of life and property recently in Austria and Germany has been intensely appalling, but we are pained to observe not any more so than the distressing and heart-rending scenes that followed the immense floods in our own country, a year ago, and those that recently occurred throughout the entire Mississippi Valley. Not only in that region, but the annually increasing freshets in the Missouri, Ohio, Columbia and smaller streams, emptying into the Pacific, are becoming more and more alarming, and all as a natural consequence of the destruction of the forests along their sources as they descend the rugged slopes of the Rocky Mountains, in the west, and those of the Alleghanies, in the east.

It is gratifying to note that the subject of protecting and preserving the natural forests of the entire country has, at last, attracted the attention of the National Government. The Secretary of the Interior has, within a few years, called the attention of Congress, on several occasions, in his annual report, to the vast importance of the subject. He has recommended in these official communications the appointment of a commission to inquire into the matter, and devise some means for effectually preserving the forests of the country, and at the last session of Congress, the President of the United States made it the subject of an extended paragraph, in his annual message to that body; Congress, to be sure, has not yet taken any action on the subject, but no doubt the gradually increasing interest that is being excited throughout the country bids fair to result in something positive being done at the next session of that body. The attention of many of the different States has also been lately attracted to the subject; some of them have passed laws designed to accomplish the more successful preservation of the forests, but in almost every instance these laws have signally failed to attain the great purpose in view, and the lamentable work of cutting down the forests of the country still continues. It is pre-eminently important, therefore, that some other and better means should be devised for the accomplishment of the important object contemplated. The recommendation of the Secretary of the Interior, of the appointment of a commission to study and thoroughly investigate the entire subject, with a view of presenting some positive and practical suggestions to Congress, is no doubt the wisest mode of procedure yet mentioned for the solution of the problem in hand, and acting upon this view of the case, the State of Vermont has recently led off, under authority of her Legislature, in the appointment of three forest commissioners by her Governor.

It may be observed here that one of the distinguishing peculiarities of the forests of this State, and especially of those in the Adirondack region is to protect the snows of winter. The snows always remain longer in the forests than they do in the cleared lands or in the open fields. The huge snow drifts along our northern borders are seldom found within forests. The fierce winds of winter do not disturb the snows in the forests, and as the season advances the thick foliage of the spruce and other evergreens, peculiar to our latitude, protect them from the melting rays of the sun. There is always a large deposit of what is known as "spruce duff," in these forests, which is composed of partially decayed trees, bark, needles, cones and mopes. This "duff" is doubtless the accumulation of centuries. It varies in thickness from two to three and sometimes as much as four feet, and possesses all the absorbing qualities of genuine sponge. The foliage of the spruce is the thickest of any other tree in the forest, and this sponge is always heavily shaded by it. But when once cut down it is a mistaken idea to suppose that the spruce will always return. As spring approaches this sponge becomes thoroughly saturated with water by the gradual melting of the snows, under the influence of the mild spring rains. It serves as a sort of reservoir, by which the waters are retained, and from which they then gradually ooze as the season advances, and in this way keep thousands of little streams trickling down the mountain sides, well supplied, during the summer, with the water of the snows of the previous winter. All the larger streams, into which these little streams empty, are consequently well supplied during the entire season. The Hudson river, instead of being subjected to immense freshets like many of our western streams, flows gradually on to the sea, without the slightest interruption whatever to the immense wealth of commerce and trade that is now borne annually upon her bosom. But if the forests of this State are allowed to be cut down and destroyed all this will soon be changed. The immense sponge of which we speak will rapidly disappear, never again to return. Where exposed to the warm rays of the sun, by the clearing of the forests, it quickly dries out and becomes an easy prey to fire, which it is impossible to extinguish when it once finds its way into it. There may be a second growth of timber in the course of half a century, which is usually composed of white poplar, birch, and other deciduous woods but the spruce and other evergreens never return, and when once destroyed the sponge ceases to exist forever. So long as the forests remain it never gets dry, but after they are cut down, and the rays of the sun are let in upon it, it becomes dry very quickly and will burn like punk without a blaze. As a consequence the beautiful hills and valleys that are now thickly covered with the rich foliage of the native forest will speedily become a barren waste. The snows upon the mountains will rapidly melt away. The little streams that now may be found all over the forests, the whole year around, will suddenly become immense torrents rushing wildly down the mountain sides for a few days, and then dry up completely during the remainder of the year. As time advances these torrents will become more and more violent and destructive. The picturesque little lakes that now glimmer in the bright sunlight all over our northern forests, like sparkling gems of the richest diamonds, will soon be filled up with rocks and earth torn from the mountain sides, by the irresistible force of the rushing waters. The volume of the Hudson river and other streams throughout the State will annually be increased into immense freshets. As these rush madly on toward the ocean the integrity of the banks along the streams will be destroyed; bridges will be swept away; the business portions of the thriving towns, cities and villages along the banks will annually be submerged; the railroads that now safely follow the course of the rivers will be destroyed, and the countless mills and manufactories that now line our streams, from one end of the State to the other, will be forced to seek new fields of operation. Then, after the torrent has passed, the waters will gradually subside into insignificant streams during the balance of the year. Sand bars and other obstructions will be found to have formed in the bottom of the rivers from the detritus washed down by the floods from the tributary streams and their navigation hopelessly destroyed. Even the capital of the State will become an inland town, and New York cease to be the greatest city of the New World. The annual obstructions in the upper Hudson, washed in from unprotected hill-slopes and other spaces, stripped of their original forests, are gradually increasing; of this there is no longer any question. We annually make large appropriations of money to clear out these obstructions, and yet the waters of the Hudson were lower last season than they were ever known to be before. All this the wisest and most scientific men in the State attribute to the destruction of the natural forests along her sources.

It is a lamentable fact that most of the forests in this State have already passed into the hands of private individuals or corporations. So long as the immense timber lands of Maine and Michigan, and other forest regions in the north and west, were able to supply timber at a less cost for transportation to market, the remaining forests in the northern part of this State were practically protected from the inroads of the lumbermen. But this protection they are now rapidly losing, and only recently large tracts of these forests have passed into the possession of private parties. When the timber is cleared off of them, these parties will abandon the lands, and the State again take possession of them for the non-payment of taxes. The only real value of any of these forest lands consists in the timber upon them, and when this has been cut down and carried off, they become mere barren wastes, utterly unfit for any agricultural purpose whatever. It is clearly evident, therefore, that the further destruction of the original forests of this State cannot successfully be avoided, unless she can reclaim such of them as may have passed out of her control, and as may be found to be essential to the preservation of the streams, by the interposition of the right of eminent domain. This is a question which, in this aspect of the case, becomes one of the very highest importance, and cannot be safely determined without the most candid and careful consideration. It effects every stream throughout the entire State, and as a natural consequence is intimately interwoven with the highest interests of the entire people. The Adirondack region alone embraces some 8,000 square miles, of which 2,703 square miles is a wilderness existing in separate sections throughout several counties, nearly all of which is thickly wooded with a heavy growth of natural forest. This area is equal to six States as large as Rhode Island, and almost twice as large as the entire State of Connecticut, or it would make four States as large as Delaware, and one State larger than that of Massachusetts. And yet of this vast area of territory the State of New York is to day in actual possession of less than 1,000 square miles. How much of this latter area is still covered by the natural forests is not known, but no doubt much of it has been taken possession of, and cleared of its timber by private parties, and then forfeited again to the State by reason of the non-payment of taxes. There is no sort of doubt that the State will again come quietly into the possession of the entire 8,000 square miles above-mentioned for the same reason as soon as the forests are cut down and destroyed.

After the most careful consideration, therefore, of the whole subject, this committee would respectfully recommend, as the first important step toward the accomplishment of the great purpose in view, the speedy passage of the bill recently introduced by the Hon. George W. Smith, of Herkimer county, who deserves the very highest praise and commendation for the deep interest, he has manifested in the preservation of the forests of the State. This bill has been referred to this committee, and we have unhesitatingly reported it back, favorably, to the house, with as little delay as possible. By its provisions the Governor is authorized to appoint a commission of three citizens, without any salary or compensation, who, for the purpose of preserving and protecting the volume of water in the streams of this State, shall carefully inquire into "the extent, nature, and location of the forests of the State," and make a detailed report of their investigation to the next Legislature, with such recommendations as, in their best judgment, may be advisable in the premises. This is substantially the bill now before the Legislature. When the work thus contemplated is once accomplished the difficulty of solving the great problem in question will no doubt, to a very great extent, be removed. We all recognize the growing necessity of some immediate and positive action, but with the great lack of practical and scientific knowledge on the subject, all are equally at a loss to determine what that action should be. One of the greatest difficulties encountered, no doubt, in the very beginning, arises from the fact that there is no intelligent or definite knowledge in existence anywhere as to the "extent, nature and location" of our forests. The archives of the State furnish us with only an approximate statement of the extent of the public lands now in possession of the State, and there is not even any definite or approximate information to be found in any of the State departments, bearing upon the extent of the forest lands belonging to the State, nor does the duty of procuring any such information come within the purview of any of the State officers. The State Engineer's office, in which all the conveyances, either for non-payment of taxes, or the redemption of lands, are recorded, does not possess even the exact number of acres of land belonging to the State. This lack of any thing definite upon this very important branch of public information no doubt exists in consequence of the number of acres frequently not being given in the plots of land coming into the possession of the State. But of the extent of the forest lands belonging to or claimed by the State, nothing is known whatever. When plots or any definite number of acres of land come into the possession of the State, they are recorded, without any reference to the extent of forest lands in the conveyance. They are taken possession of simply as lands, without knowning whether they are all forest or all cleared lands. They may be all one or the other, but of this nothing is ever known. The same is true of all the lands that have never passed out of the possession of the State. The approximate number of acres mow belonging to the State, so far as it is possible, under the circumstances, to determine the question, is about one million of acres, but there is no official information whatever as to what extent this vast area is covered with forest. But the same lack of information on this subject exists in the Comptroller's office. Nothing whatever can be obtained in that department as to the extent of the forests belonging to the State. The only duty within the province of that department of the State Government, touching the subject, is to keep a record of the lands of the State, without any reference whatever as to the extent of the forest lands. There is, for example, one farm of some 400 acres in Oneida county, belonging to the State, but there is no official information in regard to the extent of the forests upon it, and yet, it is said the timber on the farm is gradually disappearing. The same degree of ignorance as to the quantity of forest lands belonging to the State exists in regard to every section of the entire State. It is true, as already stated, that the whole of the Adirondack region is thickly covered with heavy timber, but there is no definite information whatever as to the extent of such forest lands. Another great defect, which the bill before us seeks to remedy, in the knowledge we possess of our natural forests, is as to the nature of those forests. As we have already observed the coniferous species of timber is the best calculated to retain water, but as to how much of this timber covers the public lands we know nothing. It is supposed that of this species the spruce is most abundant. We know that there are large quantities of it along the sources of the Hudson, which renders its preservation so essentially important to the volume of water in that stream, but beyond this we are still in Egyptian darkness.

But the grand old forests of this State must not be further destroyed. As Hawkeye, in Cooper's Deerslayer, says to Hurry Harry, of the stately forests on the shores of Otsego lake: "If I were King of England, the man that felled one of these trees without good occasion for the timber should be banished to a deserted and forlorn region, in which no four-footed animal ever trod." If we allow the extraordinary evils, of which we have spoken, to fall upon the people of this State it will certainly not be for any lack of knowledge on the importance of the subject. We have, at least, the benefit of the experience of other countries in the past, to guide us in the future in this State. The gradual destruction of our forests may continue, but depend upon it that if it does, those who come after us will soon have occasion to condemn us for our neglect of what has been taught us by the history of the whole world. The history of Europe has been especially noticeable in this respect. Scientific men everywhere universally concede now that the annual overflow of the streams, having their sources among the Alps, the Pyrenees, and the Carpathians have been caused by the destruction of the forests, but although the discovery was made too late for modern Europe, it was not made too late for us. All this now stands out like a beacon light in the history of the world, to forever warn us against similar evils. Neither must we overlook the alarming lesson recently taught us in the experience of certain sections of our own country. The Ohio river was higher only a few weeks ago than it was ever known to be before, and in 1880 it was lower than ever before. It is readily admitted on all sides that this is entirely the result of the destruction of the forests along the western slopes of the Alleghanies. If the forests, therefore, of this State are destroyed, and our magnificent rivers diminished to insignificant streams, it will be entirely our own fault. The wisdom of the lesson taught us by modern science is too startling to be entirely disregarded. The sad experience of almost the entire Eastern continent, with her millions of treeless acres, once traversed by innumerable streams, under the rich foliage of luxuriant forests, cannot be overlooked. The grand and picturesque Hudson, the magnetic and silvery Mohawk, the musical and restless Genesee, the busy, wandering Chenango, the solemn and abrupt Oswego, the dark and dreary Black, and the impetuous, rushing Racket are still, thank heaven, preserved — still whispering tales out of the heart of the old forests whence they flow, and may God always keep them fair and free as the guardians of our soil. But if a craven fain should raise his arm to fell the forests, then breathe no weak word of scorn or shame, but crush the villain where he stands.

STATE OF NEW YORK.

No. 131.

IN ASSEMBLY,

MARCH 23, 1888.

REPORT

OF THE SUB-COMMITTEE OF THE WHOLE.

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 304, Printed No. 416, entitled "An act to amend section 7, chapter 503 of the Laws of 1880, entitled 'An act to amend chapter 522 of the Laws of 1865, entitled 'An act to amend title 1 of chapter 16 of the first part of the Revised Statutes, in regard to roads and bridges and the appointment of overseers of highways,'" reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Odell,
Sweet,
Clapp,
Northup,
Nelson, J. C.,
Tuttle,
Weed,
12

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 383, Printed No. 506, entitled "An act to amend an act entitled 'An act to authorize the trustees of the village of Canandaigua to receive and hold in trust property for the improvement and embellishment of cemeteries held and owned by said village,' passed May 2, 1882," reported in favor of the passage of the same, with an amendment as follows:

By striking out the first words "An act," in the title, and inserting "chapter 117 of the Laws of 1882"; also strike out the words "passed May 2 1882."

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Odell,
Sweet,
Clapp,
Northup,
Williams,
Nelson, J. C.,
Tuttle,
Weed,
11

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 358, Printed No. 474, entitled "An act to amend section 1 of chapter 363 of the Laws of 1882, entitled 'An act to punish false swearing at political caucuses and assemblies,'" reported in favor of the passage of the same, with an amendment as follows:

In section 1, line 24, after the word "him," insert "or them."

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Odell,
Clapp,
Northup,
Williams,
Nelson, J. C.,
Tuttle,
Weed, 10

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 399, Printed No. 522, entitled "An act relating to depositions taken in civil actions or special proceedings of a civil nature, brought or to be brought in courts of record," reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Odell,
Sweet,
Clapp,
Williams,
Nelson, J. C.,
Tuttle,
Weed, 10

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 381, Printed No. 504, entitled "An to amend an act entitled 'An act to authorize the appointment of commissioners to fix the grade, and improve sidewalks, and open and improve streets in the town of New Lots, Kings county,' passed April 24, 1872, and known as 'chapter 349,' Laws of 1872," reported in favor of the passage of the same, with amendments as follows:

Section 1, line one, strike out the words "said act," and insert "chapter 349 of the Laws of 1872, entitled 'An act to authorize the appointment of commissioners to fix the grade and improve sidewalks and open and improve streets in the town of New Lots, Kings county"; line four, strike out the words "open, widen and."

Section 3, line two, strike out the words "at once," and insert "within ten days after this act becomes a law"; line eight, before the word "Kings," insert "the town of New Lots"; line 28, after the word "grade," strike out all down to and including the word "thereon," in line 52, and insert "The said commissioners, at the expiration of six months after the passage of this act, shall proceed to lay a blue stone sidewalk, curb and gutter, and lay such crossings as such commissioners shall deem proper within the district hereinafter described, unless within that time the property owners shall lay their own sidewalk in conformity with the rules and regulations of said commissioners; such flagging shall be from four to six feet wide at the discretion of the commissioners and two and a half inches in thickness;

the curbing shall not be less than four inches in thickness. All work performed under and by the provisions of this act shall be done by contract."

Strike out all of section 4.

Change section 5 to section 4, and strike out all of the section after the word "follows," in line three, and insert "Beginning at a point at the north-westerly corner of Broadway and VanSinderin avenue, and running thence northerly, along the westerly side of VanSinderin avenue, to the southerly side of East New York avenue; thence south-westerly, along the southerly side of East New York avenue, to the westerly side of Rockaway avenue; thence northerly, along the westerly side of Rockaway avenue, to the city line; thence along said city line to Queens county line; thence north-easterly, along said county line, to a point in a line with the easterly side of Schenck avenue; thence southerly, on a line with the easterly side of Schenck avenue, to the northerly side of Atlantic avenue; thence easterly, along the northerly side of Atlantic avenue, to the easterly side of Eldert avenue; thence southerly, along the easterly side of Eldert avenue, to the southerly side of Baltic avenue; thence along the southerly side of Baltic avenue to John street; thence southerly, along the easterly side of John street, to the southerly side of Broadway; thence along the southerly side of Broadway, to Wycoff avenue; thence southerly, along the westerly side of Wycoff avenue, to Bay avenue; thence along the northerly side of Bay avenue, to Alabama avenue; thence northerly, along the easterly side of Alabama avenue, to Broadway; thence along the northerly side of Broadway to the point or place of beginning."

Change section 6 to section 5, and in line ten, after the second word "the," insert "said"; same line after the word "commissioners," strike out all down to and including the word "who," in line thirteen; line fifteen after the word "grade," strike out all down to and including the word "thereby," in line 39, and insert "or for regulating and grading and improving in any manner any street, avenue, sidewalks or street crossing, shall be assessed upon the lands fronting upon or adjoining the line of said improvement"; line 47, after the word "the," insert "highway"; same line after the word "commissioners," strike out all down to and including the word "them," in line 49; line 49, strike out the words "to the highway commission"; line 52, change the word "commission," to "commissioners"; line 53, strike out the word "bonds," and insert "certificates".

Change section 7 to section 6, and strike out all after the word "six" in line four, down to and including the word "year," in line five; line nine, strike out the word "bonds," and insert "certificates"; line fifteen, after the word "therefor," strike out all the remainder of the section.

Change section 8 to section 7, and in line three, strike out the word "bonds," and insert "certificates"; line five, strike out the word "bonds," and insert "certificates"; line six, strike out the word "bonds," and insert "certificates"; line eight, strike out the word "bonds," and insert "certificates.

Change section 9 to section 8.

Change section 10 to section 9, and in line two, strike out the words "for any purpose whatever"; same line, change the word "three" to "two"; line seven, after the word "rendered," strike out the remainder of the section.

Change section 11 to section 10.

Change section 12 to section 11; also to amend the title so that it will read: "An act to amend chapter 349 of the Laws of 1872, entitled 'An act to authorize the appointment of commissioners to fix the grade, and improve sidewalks, and open and improve streets in the town of New Lots, Kings county.'"

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Odell,
Sweet,
Clapp,
Northup,
Williams,
Nelson, J. C.,
Tuttle,
Weed,
11

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 380, Printed No. 503, entitled "An act to provide for the election of one overseer of the poor in the town of East Chester, Westchester county, and to fix his compensation," reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Odell,
Sweet,
Clapp,
Northup,
Williams,
Nelson, J. C.,
Tuttle,
Weed,
11

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 376, Printed No. 499, entitled "An act in relation toun paid taxes in the towns of thecounty of Dutchess,' reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Odell,
Sweet,
Clapp,
Northup,
Williams,
Nelson, J. C.,
Tuttle,
Weed,
11

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 388, Printed No. 508, entitled "An act to provide for laying out, altering and improving highways in which two or more towns are interested," reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Odell,
Sweet,
Clapp,
Northup,
Williams,
Nelson, J. C.,
Tuttle,
Weed,
11

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 365, Printed No. 488, entitled "An act relative to the office of the commissioner of jurors in the city and county of New York," reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Odell,
Sweet,
Clapp
Northup,
Williams,
Nelson, J. C.,
Tuttle,
Weed,
11

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 382, Printed No. 505, entitled "An act to amend the charter of the village of Albion," reported in favor of the passage of the same, with an amendment to the title as follows:

"An act to amend chapter 125 of the Laws of 1842, entitled 'An act to condense and amend the several acts relating to the village of Albion, and the several acts amendatory thereof.'"

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Odell,
Sweet,
Clapp,
Northup,
Williams,
Nelson, J. C.,
Tuttle,
Weed,
11

Mr. Welch, from the sub-committee of the whole, to which was referred the Senate bill, G. O. 266, Printed No. 72, entitled "An act to amend chapter 415 of the Laws of 1876, entitled 'An act supplementary to chapter 737, Laws of 1873, entitled 'An act in relation to the creation and formation of water-works companies in towns and villages of the State of New York,'" reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Odell,
Sweet,
Clapp,
Northup,
Williams,
Nelson, J. C.,
Tuttle,
Weed,
Price,
12

Mr. Welch, from the sub-committee of the whole, to which was referred the Senate bill, G. O. 385, Printed No. 113, entitled "An act to authorize the village of Deposit to issue bonds for the purpose of supplying said village with pure and wholesome water, and to create a board of water commissioners," reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative,

Welch,
Campbell,
Roosevelt,
Odell,
Sweet,
Clapp,
Northup,
Williams,
Nelson, J. C.,
Tuttle,
Weed,
Price, 12

Mr. Welch, from the sub-committee of the whole, to which was referred the Senate bill, G. O. 462, Printed No. 246, entitled "An act to enable towns, the territory of which surrounds the city of Binghamton, to hold elections and transact town business in such city," reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Odell,
Sweet,
Clapp,
Northup,
Williams.
Nelson, J. C.,
Tuttle,
Weed
Price, 12

Mr. Welch, from the sub-committee of the whole, to which was referred the Senate bill, G. O. 444, Printed No. 5, entitled "An act to amend certain sections of the Code of Civil Procedure," reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Odell,
Sweet,
Clapp,
Northup,
Williams,
Nelson, J. C.,
Tuttle,
Weed,
Price, 12

Mr. Welch, from the sub-committee of the whole, to which was referred the Senate bill, G. O. 276, Printed No. 166, entitled "An act to legalize the use of a seal by the department of docks of the city of New York," reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Odell,
Sweet,
Clapp,
Northup,
Williams,
Nelson, J. C.,
Tuttle,
Weed,
11

Mr. Welch, from the sub-committee of the whole, to which was referred the Senate bill, G. O. 372, Printed No. 106, entitled "An act to amend the Code of Civil Procedure," reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Odell,
Sweet,
Clapp,
Northup,
Williams,
Nelson, J. C.,
Tuttle,
Weed,
11

Mr. Welch, from the sub-committee of the whole, to which was referred the Senate bill, G. O. 126, Printed No. 34, entitled "An act relating to proof of instruments in writing," reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Odell,
Sweet,
Clapp,
Northup,
Williams,
Nelson, J. C.,
Tuttle,
Weed,
11

Mr. Welch, from the sub-committee of the whole, to which was referred the Senate bill, G. O. 415, Printed No. 139, entitled "An act to amend the Code of Civil Procedure," reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Odell,
Sweet,
Northup,
Williams,
Nelson, J. C.,
Tuttle,
Weed,
10

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 156, Printed No. 216, entitled "An act to fix the compensation of the supervisors of Dutchess county," reported adversely thereto by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Odell,
Sweet,
Clapp,
Northup,
Williams,
Nelson, J. C.,
Tuttle, 10

For the Negative:

Weed, 1

Which report was agreed to by the House, and the bill rejected.

STATE OF NEW YORK.

No. 132.

IN ASSEMBLY,

March 26, 1883.

ANNUAL REPORT

OF THE TRUSTEES OF THE SAILORS SNUG HARBOR.

STATE OF NEW YORK:

Executive Chamber,
Albany, *March* 26, 1883.

To the Legislature :

I have the honor to transmit herewith the annual report of the trustees of the Sailors Snug Harbor for the year 1882.

GROVER CLEVELAND.

REPORT.

To the Honorable the Legislature of the State of New York:

The annual report of the Comptroller of the "Sailors Snug Harbor in the city of New York," showing the receipts and disbursements of the trustees, from the 1st day of January to the 31st day December, 1882, inclusive. Showing also the present state of the funds, and an estimate of the income for the year 1883.

Receipts.

Balance of cash on hand December 31, 1881	$66,045 57
Cash for sundries sold by Thomas Melville, Governor of the institution, and for use of the harbor, dock, etc	4,961 20
Cash for rents during the year..........................	286,990 16
Cash for interest on investments and temporary deposits in trust companies..............................	21,505 52
Cash drawn from deposits in trust companies	120,000 00
	$499,502 45

Disbursements.

Purchase of government bonds..........	$95,625 00
Loans on bond and mortgage..........................	65,000 00
Paid for improvements and repairs....................	84,755 05
Paid expenses of the institution, including taxes and insurance	162,384 14
Balance of cash December 31, 1882	91,738 26
	$499,502 45

Funds.

Buildings obtained by purchase and foreclosure of mortgage at cost.	$214,171 25
Loans on bond and mortgage..........................	88,000 00
United States currency bonds	50,000 00
New York city bonds	110,000 00
Brooklyn city bonds.................................	25,000 00

United States 4 per cent bonds	$80,000 00
Balance of cash December 31, 1882	91,738 26
	$658,909 51

Estimated income for the year 1883.

Rents of lots and buildings	$291,802 50
Ground rents outstanding and collectible	5,358 71
Interest	20,280 00
	$317,441 21

NEW YORK, *December* 31, 1882.

THOS. GREENLEAF,
Comptroller.

The executive committee of the board of trustees of the "Sailors Snug Harbor in the city of New York," having attended to the duties assigned them pursuant to a standing order of the board, report

That they have carefully examined the comptroller's accounts from the 1st day of January to the 31st day of December, 1882, inclusive: that they have also examined the vouchers for the disbursements and the securities held by the trustees, and have found the same to be in all respects correct. And that there was a balance of cash in favor of the trustees of $91,738.26, and that the same was on deposit to the credit of the trustees, viz.: $62,091.80 in the Manhattan Company, $29,632.70 in the marine bank, and $13.76 balance of petty cash in the office.

Dated NEW YORK, *March* 24, 1883.

AMBROSE SNOW,
E. G. TINKER,
GEO. W. LANE,
Executive Committee.

STATE OF NEW YORK.

No. 133.

IN ASSEMBLY,

March 28, 1883.

REPORT

OF THE SUB-COMMITTEE OF THE WHOLE.

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 335, Printed No. 452, entitled "An act to amend title 3, chapter 10, article 1, section 1030 of the Code of Civil Procedure," reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Odell,
Sweet,
Decker,
Clapp,
Williams,
Nelson, J. C.,
Tuttle,
Weed,
10

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 453, Printed No. 585, entitled "An act in relation to the Truant Home of the city of Brooklyn," reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Odell,
Sweet,
Decker,
Clapp,
Williams,
Nelson, J. C.,
Tuttle,
Weed,
10

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 355, Printed No. 471, entitled "An act to enable the trustees of the Boston University to take and hold lands in the State of New York by devise," reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Odell,
Sweet,
Decker,
Clapp,
Williams,
Nelson, J. C.,
Tuttle,
Weed,
10

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 340, Printed No. 457, entitled "An act to designate Monday, the 26th day of November, 1883, to be observed as a public holiday in the city and county of New York," reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Odell,
Sweet,
Decker,
Clapp,
Williams,
Nelson, J. C.,
Tuttle,
Weed,
10

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 242, Printed No. 328, entitled "An act relating to certain dock property in the city of New York," reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Odell,
Sweet,
Decker,
Clapp,
Williams,
Nelson, J. C.,
Tuttle,
Weed,
10

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 433, Printed No. 568, entitled "An act to amend chapter 516 of the Laws of 1836, entitled 'An act to incorporate the Elmira Mechanics' Society,' as amended by chapter 170 of the Laws of 1869," reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Odell,
Sweet,
Decker,
Clapp,
Williams,
Nelson, J. C.,
Tuttle,
Weed,
10

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 428, Printed No. 564, entitled "An act to amend chapter 504 of the Laws of 1870, entitled 'An act to authorize the construction of a railroad in 125th street, and in certain streets and avenues in the city of New York," reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Odell,
Sweet,
Decker,
Clapp,
Williams,
Nelson, J. C.,
Tuttle,
Weed,
10

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 405, Printed No. 537, entitled "An act to amend chapter 550 of the Laws of 1881, entitled 'An act to amend chapter 460 of the Laws of 1879, entitled 'An act to amend chapter 123 of the Laws of 1854, entitled 'An act to promote medical science,'" reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Odell,
Sweet,
Decker,
Clapp,
Williams,
Helm,
Nelson, J. C.,
Tuttle,
Weed,
11

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 418, Printed No. 554, entitled "An act supplementary to chapter 737 of the Laws of 1873, entitled 'An act in relation to the creation and formation of water-works companies in towns and villages of the State of New York,'" reported in favor of the passage of the same, with amendments as follows:

Section one, line two, strike out the words "the act," and insert "chapter 737 of the Laws of 1873"; lines four and five strike out the words "passed June 12, 1873."

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Odell,
Sweet,
Decker,
Clapp
Williams,
Helm,
Nelson, J. C.,
Tuttle,
Weed,
11

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 323, Printed No. 433, entitled "An act to amend chapter 409 of the Laws of 1882, entitled 'An act to revise the statutes of this State relating to banks, banking and trust companies,'" reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Odell,
Sweet,
Decker,
Clapp,
Northup,
Williams,
Helm,
Nelson, J. C.,
Tuttle,
Weed, 12

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 435, Printed No. 570, entitled "An act to confirm and legalize the acts of Isaac N. Mills as notary public of the county of Westchester, since the 30th day of March, 1882," reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Sweet,
Decker,
Clapp,
Northup,
Williams,
Helm,
Nelson, J. C.,
Tuttle,
Weed, 12

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O.   , Printed No.   , entitled "An act to authorize the city of Brooklyn to extinguish or purchase certain title to land to be used for a public street," reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Sweet,
Decker,
Clapp,
Northup,
Williams,
Helm,
Nelson, J. C.,
Tuttle,
Weed, 12

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 452, Printed No. 584, entitled "An act to amend an act entitled 'An act to extend Flushing avenue, and to lay out and improve Flushing avenue and Newtown turnpike road from Broadway to the city line and to extend other adjoining streets in the city of Brooklyn,' passed May 7, 1868," reported in favor of the passage of the same, with amendments as follows:

Section one, line one, strike out the first words "An act," and insert "chapter 674 of the Laws of 1868"; line two, after the word "out," insert "open"; lines four and five, strike out the words "passed May 7, 1868"; also amend the title, by striking out in line one, the first words "An act," and insert chapter 674 of the Laws of 1868"; line two after the word "out," insert "open," and strike out the words "passed May 7, 1868."

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Odell,
Decker,
Clapp,
Northup,
Williams,
Helm,
Nelson, J. C.,
Tuttle,
Weed, 12

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 440, Printed No. 575, entitled "An act to legalize the official acts of Frederick H. Kennedy, a justice of the peace in and for the city of Auburn, in the county of Cayuga," reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Odell,
Decker,
Clapp,
Northup,
Williams,
Helm,
Nelson, J. C.,
Tuttle,
Weed, 12

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 353, Printed No. 469, entitled "An act to authorize the Comptroller of the State of New York to adjust and settle claims due the State from the several counties thereof," reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Odell,
Decker,
Clapp,
Northup,
Williams,
Nelson, J. C.,
Tuttle,
Weed, 11

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 423, Printed No. 559, entitled "An act to authorize the Staten Island Terminal Railroad Company to transport its passengers and freight by ferry between New York city and Staten Island," reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Odell,
Decker,
Clapp,
Northup,
Williams,
Helm,
Nelson, J. C.,
Tuttle,
Weed, 12

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 371, Printed No. 466, entitled "An act to provide for the compilation and publication of the journals and records of the military expedition against the Six Nations in the year 1779, under the conduct of Major-General John Sullivan, and for other purposes," reported in favor of the passage of the same, with an amendment as follows:

Section one, line ten, change the word "Geneva," to "Geneseo."

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Odell,
Clapp,
Northup,
Williams,
Helm,
Nelson, J. C.,
Tuttle,
Weed,
11

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 389, Printed No. 509, entitled "An act declaring Bonaparte creek, in the county of Lewis, a public highway," reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Odell,
Clapp,
Northup,
Williams,
Helm,
Nelson, J. C.,
Tuttle,
Weed,
11

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 394, Printed No. 514, entitled "An act abolishing the office of railroad commissioners in Cobleskill, Schoharie county, and providing for the future safety and custody of the railroad stock belonging to such town, and the disposition and application of the dividends which have been, or hereafter shall be realized and received on such stocks," reported in favor of the passage of the same, with amendments, as follows:

Section two, line three, after the word "correct," insert "verified."

Section nine, line two, after the word "empowered," insert "at any annual or special town meeting to be called and held for that purpose, as hereinafter specified."

Section ten, line three, after the second word "town," insert "or at a special town meeeing to be called and held for that purpose, as hereinafter specified"; line ten, after the word "annual," insert "or such special."

Section eleven, line two, after the word "annual," insert "or special"; line five, after the word "annual," insert "or special"; line thirteen, after the word "annual," insert "or special."

Section twelve, line two, after the word "annual," insert "or special.

Add at the end of section fifteen, as follows: "but nothing herein contained shall be construed to prevent a vote being taken as hereinbefore provided for a sale and disposition of the proceeds to any other object or purpose."

Also amend the title, by striking out the word "and" in line three; same line, after the word "custody," insert "and sale"; line five, after the word "dividends," insert "and proceeds."

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Odell,
Decker,
Clapp,
Northup,
Williams,
Helm,
Nelson, J. C.,
Tuttle,
Weed,
12

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 231, Printed No. 491, entitled "An act to incorporate the Tonawanda Island Bridge Company, for the purpose of constructing and operating a bridge from Tonawanda Island to North Tonawanda," reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Odell,
Decker,
Clapp,
Northup,
Williams,
Helm,
Nelson, J. C.,
Tuttle,
Weed,
12

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 270, Printed No. 377, entitled "An act to provide for lengthening lock number 46 of the Erie canal, and making an appropriation therefor," reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Odell,
Sweet,
Decker,
Northup,
Williams,
Tuttle,
Weed,
10

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 406, Printed No. 538, entitled "An act to protect the waters of any inland lake of this State," reported in favor of the passage of the same, with amendments as follows:

Section one, line three, strike out the words "any inland lake of," and insert "Lake George in."

Also amend the title so that it will read: "An act to protect the waters of Lake George in this State."

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Odell,
Sweet,
Decker,
Clapp,
Northup,
Williams,
Helm,
Nelson, J. C.,
11

For the Negative.

Tuttle,
Weed,
2

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 188, Printed No. 258, entitled "An act to confirm certain sales of lands and real estate for non-payment of taxes in the village of Greenbush, in the county of Rensselaer," reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Roosevelt,
Odell,
Sweet,
Decker,
Clapp,
Northup,
Williams,
Helm,
Nelson, J. C.,
Tuttle,
Weed,
12

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 395, Printed No. 463, entitled "An act to establish a board of trustees in the city of New York for parishes in foreign countries of the Protestant Episcopal Church in the United States of America," reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Roosevelt,
Odell,
Sweet,
Decker,
Clapp,
Northup,
Williams,
Nelson, J. C.,
Tuttle,
Weed,
11

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 412, Printed No. 549, entitled "An act to amend section 2642 of the Code of Civil Procedure," reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Roosevelt,
Odell,
Sweet,
Decker,
Williams,
Nelson, J. C.,
Tuttle,
Weed, - - 9

Mr. Welch, from the sub-committee of the whole, to which was referred the Senate bill, G. O. 354, Printed No. 172, entitled "An act to amend chapter 683 of the Laws of 1871, entitled "An act amending, revising and consolidating the several acts in relation to the village of Greenbush," reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Odell,
Sweet,
Decker,
Clapp,
Williams,
Nelson, J. C.,
Tuttle,
Weed,
10

Mr. Welch, from the sub-committee of the whole, to which was referred the Senate bill, G. O. 170, Printed No. 50, entitled "An act to amend chapter 700 of the Laws of 1881, entitled 'An act to provide for the liability of towns and commissioners of highways in certain cases," reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Odell,
Sweet,
Decker,
Northup,
Williams,
Nelson, J. C.,
Tuttle,
Weed,
9

For the Negative.

Roosevelt,
Clapp,
2

Mr. Welch, from the sub-committee of the whole, to which was referred the Senate bill, G. O. 479, Printed No. 205, entitled "An act to amend chapter 555, Laws of 1864, entitled 'An act to revise and consolidate the general acts relating to public instruction,'" reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Odell,
Sweet,
Decker,
Clapp,
Northup,
Williams,
Helm,
Nelson, J. C.,
Tuttle,
12

Mr. Welch, from the sub-committee of the whole, to which was referred the Senate bill, G. O. 310, Printed No. 125, entitled "An act to amend chapter 448 of the Laws of 1877, entitled 'An act to amend chapter 305 of the Laws of 1857, entitled 'An act to consolidate school district number 6 and number 15, in the town of Mentz, in the county of Cayuga, into one school district, and to provide for the organization of a school and academy therein, and to enable the said district to loan money to erect the necessary buildings therefor,'" reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Odell,
Sweet,
Decker,
Clapp,
Northup,
Williams,
Helm,
Nelson, J. C.,
Tuttle,
Weed,
13

STATE OF NEW YORK.

No. 134.

IN ASSEMBLY,

MARCH 28, 1883.

LIST

OF SPECIAL GENERAL ORDERS.

The Speaker and Clerk, with the consent of the House, referred the following bills to the sub-committee of the whole under Rule 40.

Assembly bill 327, G. O. 241. Introduced by Mr. Bartlett:

An act to amend chapter 6 of the Laws of 1881, entitled "An act to organize and establish a police force for the city of Binghamton."

Assembly bill 376, G. O. 269. Introduced by Mr. Butts:

An act to amend chapter 340 of the Laws of 1881, entitled "An act to authorize the construction of a bridge over the Erie canal at Brockport, Monroe county."

Assembly bill 428, G. O. 318. Introduced by Mr. Bulmer:

An act to provide for the funding and payment of the floating indebtedness of Long Island City.

Assembly bill 641, G. O. 474. Introduced by Mr. Armstrong:

An act for the improvement of the highway between Thompson's mill and Fort Miller village in Washington county.

Assembly bill 643, G. O. 476. Introduced by Mr. Townsend:

An act to amend the Code of Civil Procedure.

Assembly bill 644, G. O. 477. Introduced by Mr. Cleary:

An act in relation to constructing a bridge in the city of Troy.

Assembly bill 645, G. O. 478. Introduced by Mr. Burns:

An act in relation to the publication of calendars and legal notices in the city of Brooklyn and county of Kings.

Assembly bill 648, G. O. 482. Introduced by Mr. Burns:

An act to amend the Code of Civil Procedure.

Assembly bill 595, G. O. 466. Introduced by Mr. Ferris:

An act to authorize the trustees of the village of Waverly, Tioga county, to compel steam railway companies operating within the limits of said village to employ watchmen at railroad crossings.

Assembly bill 596, G. O. 467. Introduced by Mr. Murray:

An act to repeal chapter 77 of the Laws of 1873, entitled "An act to equalize the representation to the board of supervisors of Fulton county," passed March 13, 1873.

Assembly bill 637, G. O. 469. Introduced by Mr. Snyder:

An act to amend, revise and consolidate the several acts relating to the village of Esperance, in the county of Schoharie.

Assembly bill 639, G. O. 471. Introduced by Mr. Dimmick:

An act to amend chapter 726 of the Laws of 1870, entitled "An act requiring the trustees of the village of Port Jervis to drain lands in said village."

Senate bill 144, G. O. 456. Introduced by Mr. Baucus:

An act in relation to the construction of sewers in the city of Schenectady, and to authorize the common council of such city to borrow money for that purpose.

Senate bill 173, G. O. 492. Introduced by Mr. Baucus:

An act to supply the city of Schenectady with water.

Assembly bill 650, G. O. 483. Introduced by Mr. Bartlett:

An act to provide for the payment of the salary of the late Ransom Balcom, a justice of the Supreme Court.

Assembly bill 652, G. O. 485. Introduced by Mr. J. W. Higgins:

An act to prevent loss of life in cases of the destruction of buildings by fire.

Assembly bill 657, G. O. 490. Introduced by Mr. Campbell:

An act to facilitate the removal of stable refuse from the city of New York.

Assembly bill 658, G. O. 493. Introduced by Mr. Clement:

An act to amend an act entitled "An act to amend the charter of the village of Saratoga Springs," passed March 26, 1868.

Assembly bill 659, G. O. 494. Introduced by Mr. Clement:

An act to authorize the covering of the village brook in the village of Saratoga Springs, from a point near the north side of Lake avenue, where the covering now ends, to Circular street, and to authorize the filling in and grading of a portion of Spring avenue in said village.

Senate bill 57, G. O. 248. Introduced by Mr. Thomas:

An act to amend chapter 6 of the Laws of 1881, entitled "An act to organize and establish a police force for the city of Binghamton."

Senate bill 213, G. O. 560. Introduced by Mr. H. A. Nelson:

An act to amend chapter 298 of the Laws of 1882, entitled "An act to incorporate the Vassar Brothers Hospital in the city of Poughkeepsie."

Assembly bill 555, G. O. 419. Introduced by Mr. Cary:

An act entitled "An act relating to certain contracts for the lease or conditional sale of railroad equipment and rolling stock and providing for the record thereof."

Assembly bill 561, G. O. 425. Introduced by Mr. G. H. Lindsay:

An act to amend chapter 319 of the Laws of 1848, entitled "An act for the incorporation of benevolent, charitable, scientific and missionary societies."

Assembly bill 565, G. O. 429. Introduced by Mr. Erwin:

An act to amend an act entitled "An act to authorize the formation of railroad corporations and to regulate the same," passed April 2, 1850.

Assembly bill 567, G. O. 432. Introduced by Mr. Wilcox:

An act to amend the Code of Criminal Procedure.

Assembly bill 572, G. O. 437. Introduced by Mr. Ferris:

An act to amend the Code of Criminal Procedure.

Senate bill 513, G. O. 554. Introduced by Mr. Titus:

An act authorizing the Young Men's Association of the city of Buffalo to acquire additional property.

Senate bill 259, G. O. 562. Introduced by Mr. Bowen:

An act to amend chapter 613 of the Laws of 1875, entitled "An act to authorize the formation of corporations for the safe-keeping and guaranteeing of personal property."

Assembly bill 544, G. O. 836. Introduced by Mr. Tremper:

An act to repeal chapter 348 of the Laws of 1879, entitled "An act to establish the compensation of county judge and surrogate of Ulster county."

Assembly bill 128, G. O. 122. Introduced by Mr. Evans:

An act to authorize and empower the State Board of Audit to hear, audit and determine the claims of Cayuga county for moneys expended in trials of convicts for crimes committed during their imprisonment in Auburn prison, and to make award therefor.

Assembly bill 589, G. O. 457. Introduced by Mr. Snyder:

An act to regulate and fix the toll of the bridge across the Schoharie creek at the village of Esperance, Schoharie county.

Assembly bill 593, G. O. 464. Introduced by Mr. Tremper:

An act to amend chapter 355 of the Laws of 1879, entitled "An act to establish the compensation of public officers in Ulster county."

Assembly bill 594, G. O. 465. Introduced by Mr. G. H. Lindsay:

An act to amend section 2, chapter 443, entitled "An act to regulate the appointment and compensation of janitors for the armories in the county of Kings."

Assembly bill 523, G. O. 400. Introduced by Mr. Church:

An act to preserve the purity of elections.

Assembly bill 647, G. O. 481. Introduced by Mr. Roche:

An act to legalize the official acts of the board of aldermen of Long Island City, in the county of Queens.

Assembly bill 661, G. O. 496. Introduced by Mr. Clapp:

An act to authorize and empower the State Board of Audit to hear, audit and determine the claim of Clinton county for moneys expended in the trial and execution of convict Henry King for crime committed during his imprisonment in Clinton prison, and to make award therefor.

Assembly bill 662, G. O. 497. Introduced by Mr. O'Connor:

An act to authorize and empower the State Board of Audit to hear, audit and determine the claims of Chemung county for moneys expended in the trials of two convicts for murder committed during their imprisonment in the State Reformatory in Elmira, and to make awards therefor.

STATE OF NEW YORK.

No. 135.

IN ASSEMBLY,

March 29, 1883.

REPORT

FROM THE COMPTROLLER IN REPLY TO A RESOLUTION OF THE ASSEMBLY, RELATIVE TO LANDS EXEMPT FROM TAXATION.

STATE OF NEW YORK:

Comptroller's Office,
Albany, *March* 29, 1883.

To the Assembly :

I have the honor to acknowledge the receipt of a resolution adopted by the Assembly on the 15th inst., of which the following is a copy.

"*Resolved*, That the Comptroller be, and he is requested to communicate to this house, at his earliest convenience, a statement of the lands in this State exempt from taxation by any statute of this State, except lands used for religious, charitable, or educational purposes, and except the untaxed lands or real estate of ministers of the gospel, with a reference to any act authorizing such exemptions, excepting the acts relating to religious, charitable and educational organizations and to ministers of the gospel.

By order,
WALTER H. BUNN, *Clerk*."

In reply thereto I report that, in addition to the various lands specified in said resolution, the following, by the several laws to which reference is hereby made, are also exempt from taxation, viz.:

1st. All lands belonging to this State, comprising about 600,663 acres, or to the United States, including naval, life-saving, and signal stations, light-houses, fortifications, observatories, etc.

(See section 5, title 1, chapter 13, part 1 of the Revised Statutes.)

2d. All lands now held, or which may hereafter be held, by any agricultural society in this State, and permanently used for show grounds by any such society, during the time so used.

(See chapter 183, Laws of 1856.)

3d. Lands used for cemetery purposes, except those in the city of Rochester.

(See chapter 310, Laws of 1879.)

No railroad lands in this State are exempt from taxation.

Respectfully submitted,

IRA DAVENPORT,
Comptroller.

STATE OF NEW YORK.

No. 136.

IN ASSEMBLY,

March 28, 1883.

REPORT

OF THE SECRETARY OF STATE ON THE STATISTICS OF CRIME.

STATE OF NEW YORK:

Office of the Secretary of State,
Albany, *March* 28, 1883.

To the Honorable A. C. Chapin,
Speaker of the Assembly:

Sir — I have the honor to transmit herewith a report on the statistics of crime, in this State, prepared from the reports of clerks of courts and sheriffs, as received by me, during the year ending October 31, 1882.

The long-continued illness of a clerk in this office, having charge of these statistics, has delayed the presentation of this report until now.

I am, very respectfully, yours,

JOSEPH B. CARR,
Secretary of State.

REPORT.

STATE OF NEW YORK:

OFFICE OF THE SECRETARY OF STATE,
ALBANY, *March* 28, 1883.

To the Legislature:

The Secretary of State, in compliance with title 10 of the Code of Criminal Procedure, respectfully presents the following report on the statistics of crime in the State for the year ending October 31, 1882:

Whole number of convictions reported by county clerks in courts of record	2,877
Whole number of convictions reported by county clerks in courts of record in last annual report	2,923
Decrease	46

The convictions thus reported were as follows:

Offenses against the person	631
Offenses against the person by last annual report	643
Decrease	12
Offenses against property, with violence	630
Offenses against property, with violence, by last annual report	617
Increase	13
Offenses against property, without violence	1,069
Offenses against property without violence, by last annual report	1,025
Increase	44
Offenses against the currency	53
Offenses against the currency, by last report	57
Decrease	4
Offenses not included in foregoing	494
Offenses not included in foregoing, by last report	581
Decrease	87

Females convicted in courts of record	134
Females convicted in courts of record, by last report	151
Decrease	17

Convictions in courts of record, reported by county clerks	2,877
Convictions in courts of record, reported by sheriffs	2,479
Excess reported by county clerks	398

SPECIAL SESSIONS.

Convictions reported by county clerks	21,288
Convictions reported by county clerks, by last report	26,871
Decrease	5,583

SHERIFFS' REPORTS OF SPECIAL SESSIONS IN CITIES.

Convictions	76,092
Convictions by last annual report	69,518
Increase	6,574

Females convicted	21,664
Females convicted, by last report	20,887
Increase	777

The following is a synopsis of the tabular statements annexed to this report:

Table A gives the number of convictions in courts of record during the year ending October 31, 1881, as reported by clerks of counties and criminal courts.

Table B is an abstract of Table A, giving in a condensed form the whole number of convictions in courts of record for each species of crime, specifying the county, and the number of convictions in each county.

Table C exhibits the proportion of males to females convicted in courts of record, with a classification of their offenses.

Table D is a statement of the number of convictions in courts of record, from the year 1830 to and including the year ending October 31, 1882.

Table E gives the ages, social relations, nativity, etc., of those convicted in courts of record, as reported by sheriffs.

Table F is a condensed statement of the details given in Table E.

Table G gives the occupation of those convicted in courts of record, as reported by sheriffs.

Table H is an abstract of the return of clerks of criminal courts, giving the number of indictments tried in each county at the several terms of criminal courts, the number of convictions, the number acquitted, the number convicted on the plea of guilty, and the number of persons indicted and discharged without trial.

Table I is an abstract of Table H.

Table K is an abstract of the returns by county clerks of certificates of convictions in courts of special sessions, filed in the respective county clerks' offices during the year.

Table L is an abstract of Table K.

Table M is an abstract of the returns of the sheriffs of the counties of New York, Albany, Broome, Columbia, Cayuga, Chemung, Erie, Kings, Monroe, Rensselaer, Ulster, Schenectady, St. Lawrence, Queens, Niagara, Orange, Onondaga, Oswego and Oneida, as to convictions in courts of special sessions, in the cities of New York, Albany, Cohoes, Binghamton, Hudson, Auburn, Elmira, Buffalo, Brooklyn, Rochester, Troy, Kingston, Schenectady, Ogdensburg, Long Island City, Lockport, Newburgh, Syracuse, Oswego, Rome and Utica.

SYNOPSIS OF REPORT ON PARDONS, ETC.

Table A gives the total number of pardons, conditional and unconditional, commutations of sentences, and restoration to the rights of citizenship, by the Governors of this State, since the year 1846.

Table B shows the names of the persons pardoned in the year 1877, the counties where convicted, crimes, sentences, and dates of pardons.

Table C shows the sentences abridged or commuted in the year 1877, with the names of the convicts.

Table D gives the names of the persons restored to the rights of citizenship in the year 1877, the counties where convicted, crimes, sentences, and dates of restoration.

Table E shows the reprieves of persons sentenced to be hanged, granted by the Governor in the year 1877, the name of the convict, crime, date of respite, sentence, and limitation of respite.

During the year the clerks of the counties of Cattaraugus, Chenango, Fulton, Greene, Hamilton, Lewis, Livingston, Montgomery, Putnam, Richmond, Rockland, Schenectady, Schoharie and Washington have failed to report convictions had in courts of record.

From the clerks of the counties of Cattaraugus, Chenango, Greene, Hamilton, Fulton, Franklin, Montgomery, Niagara, Clinton, Columbia, Lewis, Livingston, Orange, Oswego, Putnam, Richmond, Rockland, Schenectady, Schoharie, Suffolk, Sullivan, Warren, Washington, no statements have been received.

The clerks of the counties of Chenango, Cattaraugus, Clinton, Columbia, Fulton, Greene, Hamilton, Lewis, Livingston, Montgomery, Orange, Richmond, Rockland, Schoharie, Yates, have failed to report convictions had in courts of special sessions.

From the sheriffs of the counties of Dutchess, Jefferson, Schenectady, Westchester, no reports were received.

JOSEPH B. CARR,
Secretary of State.

DOCUMENTS

Accompanying the Report of the Secretary of State on Criminal Statistics.

TABLE A.

Gives the number of convictions in courts of record, during the year ending October 31, 1882, *as reported by clerks of counties and criminal courts.*

COUNTY OF ALBANY.

COURTS.	Date of conviction.	Number of convictions.	Offense.	Sentence.
	1881.			
Sessions....	November .	1	Bigamy	Penitentiary 1 year 6 mos.
		1	Burglary, 3d degree	“ 3 years.
		1	Forgery, 3d “	“ 1 year 6 mos.
		1	Grand larceny	“ 4 years.
		1	“	State reformatory 5 years.
		1	Obstructing highway	Suspended.
		1	Perjury	Penitentiary 1 year 6 mos.
		1	Rape	State prison 15 years.
Oyer & Ter.	December .	1	Assault with weapon	Penitentiary 1 year.
	1882.			
Sessions....	January ..	2	Burglary, 3d degree	“ 4 years.
		1	“ 3d “	“ 2 years 6 mos.
		1	“ 3d “	“ 2 years.
		1	“ 3d “	“ 1 year 3 mos.
		1	Grand larceny	“ 2 years.
		2	“	“ 3 years.
		3	Petit larceny	“ 6 months.
		1	“	House of refuge.
		1	“ 2d offense	Penitentiary 2 years.
		1	“ 2d “	“ 1 year.
		1	“ after felony	“ 3 years.
		1	Rape	State prison 15 years.
		1	Receiving stolen goods	Penitentiary 4 years.
		1	“ “	“ 1 year 6 mos.
Oyer & Ter.	February ..	2	Burglary, 3d degree	“ 1 year.
		1	Grand larceny	“ 1 year.
		1	Petit larceny	“ 6 months.
		1	“	“ 2 months.
Sessions....	March.....	1	Burglary, 3d degree	“ 2 years.
		1	“ 3d “	“ 3 years.
		1	Escape from jail	“ 1 year.
		1	False pretenses	“ 1 year.

Table A.— County of Albany —(Continued).

COURTS.	Date of conviction.	Number of convictions.	Offense.	Sentence.
Sessions....	1882. March.....	5	Grand larceny	Penitentiary 5 years.
		3	Petit larceny	" 6 months.
		1	"	Pen'y 6 mos. and $100 fine.
		1	"	Penitentiary 1 year.
		1	"	House of reformation.
		1	Receiving stolen goods	Penitentiary 2 years.
Sessions....	June......	1	Assault and battery	Fine $50.
		1	" " to kill	State prison 1 year.
		1	Burglary, 3d degree	Penitentiary 4 years.
		1	" 2d "	State prison 2 years.
		1	Grand larceny	Penitentiary 1 year.
		1	Petit larceny after felony	" 4 years.
		1	Robbery, 1st degree	State prison 5 years.
		1	Violating excise law	Fine $75.
Sessions....	September.	1	Attempt at burg. 3d deg	Penitentiary 1 year.
		1	Burglary, 2d degree	State prison 5 years.
		1	" 3d "	House of reformation.
		1	False pretenses	Penitentiary 30 days.
		1	"	" 1 year.
		1	"	" 2 years.
		2	Grand larceny	" 2 years.
		1	"	" 1 year.
		1	Larceny from the person	" 2 years.
		2	Petit larceny	" 90 days.
		1	Rape	State prison 5 years.
		2	Robbery, 1st degree	" 5 years.
Oyer & Ter..	October...	2	Assault and battery	Penitentiary 60 days.

COUNTY OF ALLEGANY.

COURTS.	Date of conviction.	Number of convictions.	Offense.	Sentence.
Sessions....	1882. January...	1	Burglary	State prison 3 years 6 mos.
		1	Petit larceny	Penitentiary 1 year 6 mos.
		1	"	Jail 60 days.
Oyer & Ter..	January...	1	Manslaughter, 1st degree	State prison 19 years 6 ms.
		1	Murder, 1st degree	Death.
Sessions....	April......	1	Larceny	Penitentiary 1 year.
		1	"	State prison 3 years.
Sessions....	May.......	2	Assault	Jail 3 months.
		1	" with weapon	Penitentiary 1 year.
		1	Forgery	State prison 3 years.
		1	Larceny	" 3 years.
		1	Violating excise law	Fine $60.
Oyer & Ter..	June......	1	Assault with weapon	Penitentiary 1 year.
		1	Grand larceny	State prison 3 years.

COUNTY OF BROOME.

COURTS.	Date of conviction.	Number of convictions.	Offense.	Sentence.
Sessions....	1881. November.	2	Selling liquor on Sunday	Fine $100.
		2	" without lic.	" 100.
		1	" "	" 50.
		1	" "	" 40.
Oyer & Ter..	1882. March.....	1	Assault to kill	State prison 10 years.
		1	Forgery, 3d degree	" 18 months.
		1	Larceny	" 18 months.
		1	"	State reformatory.
		1	Selling liquor without lic.	Fine $50.
Sessions....	April......	1	Burglary and larceny	State prison 2 years 6 mos.
		1	False pretense	Penitentiary 2 months.
		1	Grand larceny	State prison 1 year.
		2	Robbery	" 5 years.
Oyer & Ter..	October...	1	Assault to harm	" 3 years.
		1	Burglary	State reformatory.

Table A. — (Continued).

COUNTY OF CAYUGA.

COURTS.	Date of conviction.	Number of convictions.	Offense.	Sentence.
Sessions....	1881. December..	1	Bigamy	State prison 2 years 6 mos.
		1	Burglary and larceny	" 7 years 6 mos.
		1	Grand larceny	" 7 years.
		1	Larceny from person	" 2 years 6 mos.
		4	Violating excise law	Fine $30.
		1	" "	" 50.
		1	" "	" 150.
Sessions....	1882. January....	2	Forgery	State prison 1 year 6 mos.
		2	Violating excise law	Fine $75.
		1	" "	" 30.
Sessions....	March.....	1	Burglary	State prison 1 year.
		1	" 1st degree	" 8 years.
		1	Petit larceny, 2d offense	" 1 year.
		1	Violating excise law	Fine $100.
		2	" "	" 75.
		5	" "	" 50.
		3	" "	" 40.
		3	" "	" 30.
Oyer & Ter..	May.......	1	Assault and battery	" 20.
		1	" to rape	State prison 4 years.
		1	Keeping gambling house	Fine $50.
		2	Violating excise law	" 75.
		10	" "	" 50.
Sessions....	June	2	Assault and battery	Jail 6 months and fine $50.
		1	" to rape	State prison 5 years.
		1	Burglary	Penitentiary 1 year 6 mos.
		1	Grand larceny	State prison 3 years.
		1	Petit larceny	Jail 10 days and $10 fine.
		1	" 2d offense	Penitentiary 1 year.
		1	Violating excise law	Fine $80.
		2	" "	" 75.
		6	" "	" 50.
Oyer & Ter..	October ...	1	Assault and battery	Suspended.
		1	Burglary	State prison 1 year.
		1	"	" 3 years.
		1	" 2d degree	" 5 years.
		1	Grand larceny	State reformatory.
		1	Petit larceny, 2d offense	State prison 2 years.

COUNTY OF CHAUTAUQUA.

COURTS.	Date of conviction.	Number of convictions.	Offense.	Sentence.
Oyer & Ter.	1882. January ...	1	Receiving stolen goods	State reformatory.
Sessions....	February..	1	Selling liquor without lic.	Fine $125.
		1	Burglary	State prison 4 years.
		1	"	" 3 years 6 mos.
		1	"	" 2 years 6 mos.
		1	Receiving stolen goods	" 5 years.
		1	Selling liquor without lic.	Fine $150.
		1	" "	" 50.
		1	" "	" 40.
		5	" "	Suspended.
Oyer & Ter.	May.......	2	Burglary, 3d degree	State prison 4 years.
		2	" 3d "	" 3 years.
		1	" 3d "	" 2 years.
		3	Selling liquor without lic.	Fine $50.
		3	" "	" 40.
		1	" "	" 35.

Table A. — County of Chautauqua — (Continued).

COURTS.	Date of conviction.	Number of convictions.	Offense.	Sentence.
	1882.			
Sessions....	June......	1	Assault on officer.........	Fine $100.
		1	" "	" 75.
		1	Robbery, 1st degree.......	State prison 10 years.
		1	Violating excise law.......	Fine $50.
Sessions....	October...	1	Assault and battery.......	Penitentiary 4 months.
		1	" "	" 6 months.
		1	Selling liquor without lic..	Fine $75.

COUNTY OF CHEMUNG.

COURTS.	Date of conviction.	Number of convictions.	Offense.	Sentence.
	1881.			
Sessions....	December.	1	Forgery, 3d degree........	State prison 5 years.
		1	Larceny from person......	" 5 years.
		1	Petit larceny..............	Jail 4 months.
		1	Robbery..................	State prison 10 years.
		1	"	State reformatory.
	1882.			
Oyer & Ter.	January....	1	Grand larceny............	State prison 2 years 6 mos.
Sessions....	March.....	1	Burglary and larceny.....	State reformatory.
		1	Forgery..................	"
		1	False pretenses...........	Jail 6 months.
		1	Selling liquor without lic..	Fine $50.
Sessions....	June......	2	Burglary and larceny......	State reformatory.
		1	Embezzlement...........	State prison 1 year.
		1	Grand larceny............	" 5 years.
		1	"	" 4 years.
Sessions....	October...	1	"	" 4 years.
		2	"	State reformatory.
		1	"	Penitentiary 2 years.

COUNTY OF CLINTON.

COURTS.	Date of conviction.	Number of convictions.	Offense.	Sentence.
	1881.			
Sessions....	November..	2	Breach of excise..........	Suspended.
		1	" "	Fine $50.
		1	" "	" 35.
		4	" "	" 25.
		1	" "	" 10.
		1	Grand larceny............	State prison 3 years.
		3	Keeping disorderly house..	Fine $30.
		1	Violating game law........	" 25.

COUNTY OF COLUMBIA.

COURTS.	Date of conviction.	Number of convictions.	Offense.	Sentence.
	1881.			
Sessions....	November..	1	Assault to kill............	Penitentiary 5 years.
		1	Forgery..................	" 5 years.
		1	Petit larceny..............	Jail 59 days.

COUNTY OF CORTLAND.

COURTS.	Date of conviction.	Number of convictions.	Offense.	Sentence.
	1881.			
Sessions....	November..	1	Violating excise law......	Fine $50.
	1882.			
Oyer & Ter..	January....	1	Burglary, 3d degree.......	State prison 5 years.
		1	" 3d "	State reformatory.
		1	Grand larceny............	State prison 3 years.
		1	G. L. and rec. stolen goods	" 2 years.
		1	Manslaughter, 3d degree..	Penitentiary 4 years.
		1	Petit larceny, 2d offense....	State prison 2 years.
Sessions....	February..	1	Petit larceny..............	Fine $50.
Oyer & Ter..	June......	2	Manslaughter, 3d degree...	State reformatory.
Sessions....	September.	1	Assault and battery.......	Fine $25.
		1	" "	" 50.
		1	Burglary, 3d degree.......	State reformatory.

Table A.— (Continued).

COUNTY OF DELAWARE.

COURTS.	Date of conviction.	Number of convictions.	Offense.	Sentence.
	1882.			
Oyer & Ter.	February..	1	Petit larceny..............	Jail 30 days.
		1	Selling liquor without lic..	Fine $50.
Sessions....	March.....	2	" " ..	" 50.
		1	" " ..	" 40.
		1	" " ..	" 30.
Sessions...	August....	1	" " ..	" 40.
		1	" " ..	" 50.
Oyer & Ter..	October ...	1	Assault to rape............	State prison 5 years.
		1	Burglary, 3d degree and lar.	" 3 years.
		1	" 3d " .	State reformatory.
		1	Forgery	"

COUNTY OF DUTCHESS.

COURTS.	Date of conviction.	Number of convictions.	Offense.	Sentence.
	1881.			
Sessions....	December..	1	Assault and battery to rape	State prison 1 year 6 mos.
		1	Petit larceny.......... ...	Jail 59 days.
		1	Selling liquor on Sunday..	Fine $25.
		1	" " ..	" 60.
		1	" without lic ..	" 10.
	1882.			
Sessions....	February..	1	Assault and battery	Penitentiary 4 months.
		1	Burglary, 3d degree.......	State prison 2 years 6 mos.
		1	Selling liquor without lic..	Fine $100.
Sessions....	April......	1	Grand larceny	State prison 2 years.
Sessions....	June	1	Burglary, 3d degree.......	" 1 year.
		2	" 3d "	" 2 years.
Sessions....	August....	1	Assault and battery	Fine $25.
		1	" to rape	State prison 3 years.
		1	Burglary, 3d degree.......	" 2 years.
		1	Petit larceny	House of refuge
		2	Selling liquor on Sunday..	Fine $50.
Oyer & Ter..	October ...	1	Petit larceny..............	Penitentiary 6 months.

COUNTY OF ERIE.

COURTS.	Date of conviction.	Number of convictions.	Offense.	Sentence.
	1881.			
Oyer & Ter.	November..	1	Petit larceny..............	Penitentiary 6 months.
Superior....	November..	1	Manslaughter, 4th degree..	" 1 year 6 mos.
Sessions....	November..	1	Assault and battery	Fine $50.
		1	" to harm..........	State prison 4 years.
		1	Burglary, 3d degree.......	" 3 years.
		2	" 3d "	State reformatory.
		1	Embezzlement	State prison 2 years.
		1	"	Penitentiary 90 days.
		1	Forgery, 3d degree........	" 3 years.
		1	Grand larceny	State prison 3 years.
		1	Larceny from person......	" 4 years.
		1	" "	Penitentiary 6 months.
		1	Petit larceny..............	" 6 months.
		1	"	" 4 months.
		1	"	Fine $50.
		1	"	" 10
		1	Petit larceny, 2d offense..	Penitentiary 3 years.
		1	" 2d " ...	" 2 years.
		1	Shooting at another to harm	State prison 4 years.
	1882.			
Superior....	January ...	1	Assault and battery	Penitentiary 8 months.
		1	" to harm..........	" 1 year 9 mos.
		1	Incest....................	" 2 years.

Table A.— County of Erie — (Continued).

COURTS.	Date of conviction.	Number of convictions.	Offense.	Sentence.
	1882.			
Superior	January	1	Incest	State prison 6 years.
		6	Keeping gambling house	Fine $25.
		2	Petit larceny	" 60.
		1	"	" 20.
		1	"	State reformatory.
		3	"	Penitentiary 60 days.
		2	Robbery	State reformatory.
Sessions	January	1	Assault to kill	Penitentiary 1 year 6 mos.
		1	Burglary, 3d deg. after P.L.	State reformatory.
		1	Grand larceny	Penitentiary 1 year 6 mos.
		2	Keeping gambling house	Fine $50.
		2	" "	" 25.
		1	Larceny from person	State reformatory.
		1	Petit larceny	Penitentiary 4 mos.
		1	"	Fine $50.
		1	Shooting at another to kill.	State prison 7 years.
Sessions	March	1	Assault and battery	Penitentiary 1 year.
		1	Bigamy	" 3 years.
		5	Burglary 3d degree	State reformatory.
		1	False pretenses	Fine $100.
		1	Forgery, 3d degree	Penitentiary 1 year.
		1	" 4th "	Suspended.
		1	Petit larceny	Penitentiary 6 mos.
		1	"	" 60 days.
		1	" 2d offense	" 1 year.
		1	" after felony	" 2 years.
		1	Robbery	State prison 5 years.
		1	" after petit larceny.	" 20 years
Superior	April	1	Assault and battery	Fine $10.
		2	Bigamy	Penitentiary 1 year.
		1	Burglary, 3d degree	State reformatory.
		2	Jumping on R. R. train	Fine $5.
		1	Petit larceny	" 100.
		1	"	" 40.
		1	" 2d offense	State reformatory.
		1	Receiving stolen goods	Penitentiary 4 mos.
		1	" "	" 60 days.
		1	Seduction	State reformatory.
			COUNTY OF ESSEX.	
	1881.			
Oyer & Ter.	December	1	Violating excise law	Fine $50.
	1882.			
Session.	January	3	Assault and battery	" 100.
		2	" "	" 75.
		1	Careless use of fire-arms	" 50.
		1	Grand larceny	State prison 2 years.
		1	Pract'g as phys. w'out lic'ns	Fine $100.
		1	Rape	State prison 10 years.
		1	Violating excise law	Fine $100.
		2	" "	" $50.
			COUNTY OF FRANKLIN.	
	1881.			
Sessions	December	1	Assault and battery	Fine $50.
		1	" with weapon	" 150.
		2	" "	" 25.
		1	Grand larceny	State reformatory.
		1	Selling liquor on Sunday	Fine $50.
	1882.			
Sessions	March	1	Arson, 1st degree	State prison life.
Sessions	June	2	Violating excise law	Fine $30.

Table A.— County of Franklin — (Continued).

COURTS.	Date of conviction.	Number of convictions.	Offense.	Sentence.
	1880.			
Sessions....	June	1	Violating excise law.......	Fine $100.
		1	“ “	“ 5.
Sessions....	September.	1	Forgery, 3d degree........	State reformatory.

COUNTY OF GENESEE.

COURTS.	Date of conviction.	Number of convictions.	Offense.	Sentence.
	1881.			
Oyer & Ter.	November .	1	Assault and battery.......	Penitentiary 10 mos.
	1882.			
Sessions....	January....	1	“ to kill	State prison 7 years.
		1	“ and resisting offic'r	Peni'ry 1 yr. and $500 fine.
		1	Stoning railroad train.....	State prison 5 years.
		2	Violating excise law.......	Fine $50.
Sessions....	April......	1	Assault and battery.......	“ 10.
		1	Resisting an officer........	Penitentiary 3 mos.
Oyer & Ter.	June	1	Selling liquor on Sunday..	Fine $50.
		1	“ “ ..	“ 25.

COUNTY OF HERKIMER.

COURTS.	Date of conviction.	Number of convictions.	Offense.	Sentence.
	1882.			
Sessions....	May.......	1	Burglary and larceny......	State prison 5 years.
		1	Forgery..................	“ 5 years.
		3	Grand larceny...........	“ 2 years.
		2	“	“ 1 year.
		1	“	State reformatory.
		1	Receiving stolen goods....	Penitentiary 90 days.
Oyer & Ter.	May.......	1	Murder, 2d degree........	State prison life.

COUNTY OF JEFFERSON.

COURTS.	Date of conviction.	Number of convictions.	Offense.	Sentence.
	1881.			
Sessions....	November .	1	Assault to kill	State prison 7 years.
Oyer & Ter.	December .	1	Burglary, 3d degree	“ 5 years.
		1	“ “	“ 3 years.
		2	“ “	“ 2 years.
		1	Grand larceny............	“ 5 years.
		1	“	Penitentiary 1 year.
	1882.			
Oyer & Ter.	April......	1	Assault and battery.......	Fine $50.
		2	Burglary, 2d degree........	State reformatory.
		1	“	Penitentiary 3 years.
		1	Petit larceny, 2d offense....	State prison 4 years.
		1	Selling liquor on Sunday..	Fine $100.
Sessions ...	May.......	1	Assault and battery.......	“ 100.
		1	Selling liquor on Sunday..	“ 100.
Sessions....	September.	1	“ without lic..	“ 100.
		1	Petit larceny, 2d offense...	State prison 1 year.

COUNTY OF KINGS.

COURTS.	Date of conviction.	Number of convictions.	Offense.	Sentence.
	1881.			
Sessions....	November .	1	Attempt at false pretenses.	Penitentiary 1 year.
		1	“ petit larceny...	Elmira reformatory.
		3	Burglary, 3d degree........	Penitentiary 1 year 6 mos.
		1	“ “ and P.L.	“ 1 year.
		2	Burg. 3d deg. P.L. & R.S.g's	“ 4 years 6 mo.
		1	Embezzlement	“ 6 mos.
		1	Grand larceny	“ 1 year 6 mos.
		1	Manslaughter, 3d degree...	“ 4 years.
		4	Petit larceny..............	“ 6 mos.
		1	“	“ 3 mos.
Sessions....	December..	1	Assault and battery.......	“ 6 mos.
		1	“	Jail 20 days.

Table A. — County of Kings — (Continued).

COURTS.	Date of conviction.	Number of convictions.	Offense.	Sentence.
Sessions....	1881. December .	1	Assault and bat. to injure..	Penitentiary 4 years 6 mos.
		1	Aiding prisoner to escape..	" 1 year.
		1	Attempt at burg. 1st deg...	" 2 years 6 mos.
		4	" 3d " ...	" 2 years 6 mos.
		1	" 3d " ...	Jail 29 days.
		1	Bigamy............... ...	Penitentiary 1 year 4 mos.
		2	Burglary, 3d deg. & P. L..	" 1 year 6 mos.
		1	" 3d " ..	" 1 year 4 mos.
		1	" 3d " ..	" 2 years 4 mos.
		1	Embezzlement	" 1 year 4 mos.
		2	Exposure of person	" 1 year.
		1	False pretenses	" 2 years 6 mos.
		1	Forgery, 2d degree........	" 6 years 6 mos.
		1	" 3d "	Elmira reformatory.
		1	Grand larceny............	Penitentiary 2 years.
		1	"	" 4 years.
		1	Keeping disorderly house..	" 1 year.
		1	Larceny from person......	" 2 years.
		1	Manslaughter, 3d degree...	" 4 years.
		1	Malicious annoyance	Pen'y 1 year and $200 fine.
		3	Petit larceny.............	Penitentiary 6 months.
		1	"	" 5 months.
		1	"	" 2 months.
		1	"	Jail 20 days.
		1	" from person..	Penitentiary 3 years 6 mos.
Sessions....	1882. January ...	4	Attempt at burg. 3d degree.	" 1 year 6 mos.
		1	" 3d "	" 1 year.
		1	" 3d "	" 1 year 9 mos.
		1	" 3d "	" 2 years 6 mos.
		1	Burglary, 3d degree......	" 2 years 4 mos.
		1	" 3d "	" 1 year.
		1	Burglary, 3d deg. & G. L..	" 1 year.
		1	Forgery, 3d degree........	" 1 year 3 mos.
		1	Grand larceny............	" 2 years 4 mos.
		1	"	" 3 years.
		2	"	" 1 year 4 mos.
		1	Grand lar. & rec. stolen g's.	" 3 years 6 mos.
		1	" "	" 1 year 4 mos.
		1	Petit larceny.............	" 6 months.
		1	Sodomy	" 3 years 6 mos.
Oyer & Ter..	March	1	Manslaughter, 3d degree ..	" 1 year 6 mos.
Sessions....	March	1	Assault and battery	Jail 20 days.
		1	" "	Penitentiary 1 year.
		1	Attempt at burg. 3d deg...	" 6 months.
		1	" 3d " ...	" 2 years.
		2	Attempt at grand larceny..	" 1 year.
		1	" " ..	Jail 29 days.
		1	Burglary, 3d deg. & G. L..	Penitentiary 5 years.
		1	" 3d " ..	" 1 year.
		1	" 3d " P. L..	" 3 years 6 mos.
		2	" 3d " ..	" 1 year.
		1	" 3d " ..	" 1 year 3 mos.
		1	Carrying concealed weapon	Jail 29 days.
		1	Grand larceny...........	House of refuge.
		1	"	State reformatory.
		2	Grand lar. & rec. stolen g's.	Penitentiary 1 year.
		1	Keeping disorderly house..	" 1 year.
		1	Manslaughter, 3d degree...	" 4 years.
		2	Petit larceny.............	" 3 months.
		1	"	" 6 months.
		1	"	Jail 20 days.

Table A. — County of Kings — (Continued).

COURTS.	Date of conviction.	Number of convictions.	Offense.	Sentence.
	1882.			
Sessions....	March.....	1	Robbery, 1st degree.......	Penitentiary 5 years.
Sessions....	May..	1	Assault and battery	“ 1 year 3 mos.
		1	“ to harm..........	“ 1 year.
		1	“ kill	“ 5 years.
		2	Attempt at burg. 1st degree	“ 10 years.
		1	“ 2d “	“ 5 years.
		2	“ 3d “	“ 1 year.
		2	“ 3d “	“ 1 year 6 mos.
		1	“ 3d “	“ 9 months.
		1	“ 3d “	“ 6 months.
		1	“ 3d “	“ 2 years 6 mos.
		1	“ 3d “	“ 1 year 3 mos.
		1	“ 3d “	State reformatory.
		1	Burglary, 3d degree	House of refuge.
		2	Burglary, 3d deg. & G. L..	Penitentiary 5 years.
		1	“ 3d “ ..	“ 1 year.
		1	“ 3d “ ..	“ 3 years 6 mos.
		2	“ 3d “ ..	“ 1 year 6 mos.
		1	“ 3d “ P. L..	“ 4 years 6 mos.
		1	“ 3d “ ..	“ 1 year 3 mos.
		1	“ 3d “ ..	“ 5 years.
		1	“ 3d “ ..	“ 1 year 6 mos.
		1	“ 3d “ ..	State reformatory.
		1	False pretenses	“
		1	“	Penitentiary 2 years.
		1	“	“ 1 year.
		1	Grand larceny...........	“ 2 years.
		1	“	“ 1 year 6 mos.
		1	“	State reformatory.
		1	“ from person.	Penitentiary 6 years 6 mos.
		1	Misdemeanor	“ 1 year.
		5	Petit larceny.............	“ 6 months.
		2	“ from person..	“ 6 months.
		1	Rape	State prison 20 years.
Sessions. ..	June	1	Burglary, 3d degree	Penitentiary 3 years 6 mos.
		1	Perjury	“ 9 months.
Sessions....	July.......	2	Assault and battery to kill.	“ 8 years.
		1	Attempt at burg. 3d degree	“ 1 year 3 mos.
		1	“ 3d “	“ 1 year 6 mos.
		1	“ 3d “	“ 1 year.
		1	“ 3d “	“ 2 years 6 mos.
		1	“ 3d “	Jail 20 days.
		1	Attempt at grand larceny..	Penitentiary 2 years 6 mos.
		1	“ rape	“ 8 years.
		1	Bigamy	“ 4 years 6 mos.
		1	Burglary, 3d degree.	“ 3 years 6 mos.
		1	“ 3d “	“ 1 year 3 mos.
		3	“ 3d “	“ 2 years 6 mos.
		1	Carrying burglar tools.....	“ 1 year.
		1	Indecent exposure of pers'n	“ 1 year.
		1	“ “	“ 9 months.
		1	Petit larceny.............	“ 60 days.
		4	“	“ 6 months.
		1	“	“ 3 months.
		1	“ from person..	“ 2 years 6 mos.
		1	Receiving stolen goods ...	“ 9 months.
Sessions....	September.	4	Assault and battery	“ 6 months.
		1	“ “	House of refuge.
		1	Attempt at burg. 3d degree	“
		1	“ 3d “	Penitentiary 1 year.
		1	“ 3d “	“ 15 months.
		1	“ 3d “	“ 2 years 6 mos.

Table A. — *County of Kings* — (Continued).

COURTS.	Date of conviction.	Number of convictions.	Offense.	Sentence.
	1882.			
Sessions....	September.	1	Attempt at forgery, 3d deg.	Penitentiary 5 years.
		1	“ rape	“ 10 years.
		1	Burglary, 3d degree.......	“ 1 year 3 mos.
		1	“ 3d “ & P. L.	“ 1 year 3 mos.
		1	“ 3d “ “	“ 2 years 6 mos.
		1	“ 3d “ “	“ 3 years 6 mos.
		1	“ 2d “ “	“ 5 years.
		1	“ 3d “ G. L.	“ 1 year 6 mos.
		1	Forgery, 3d degree........	“ 5 years.
		3	Grand larceny....	“ 5 years.
		1	“	“ 2 years 6 mos.
		1	“	“ 1 year 3 mos.
		1	Petit larceny..............	“ 3 months.
		1	“	“ 4 months.
		1	“	“ 6 months.
		2	Robbery, 1st degree... ...	“ 5 years.
Sessions....	October....	1	Aiding prisoner to escape..	“ 6 months.
		1	Assault and battery	“ 6 months.
		1	“ “	“ 1 year.
		1	Attempt at burg. 3d degree	Jail 25 days.
		1	“ grand larceny..	Penitentiary 1 year 3 mos.
		2	Burglary, 3d degree... ...	“ 3 years.
		1	“ 3d “	“ 3 years 6 mos.
		1	“ 3d “	“ 5 years.
		1	“ 3d “ & P. L.	“ 5 years.
		1	Grand larceny............	“ 1 year.
		1	“	“ 1 year 3 mos.
		1	“	“ 3 years 6 mos.
		2	“	“ 4 years 6 mos.
		2	“	House of refuge.
		1	Indecent exposure	Penitentiary 1 year.
		2	Petit larceny..............	“ 6 months.
		2	Robbery, 1st degree.......	“ 5 years.
		1	“ 1st “	“ 10 years.

COUNTY OF MADISON.

COURTS.	Date of conviction.	Number of convictions.	Offense.	Sentence.
	1881.			
Sessions....	December..	1	Assault	Fine $20.
		2	Receiving stolen goods....	Penitentiary 6 months.
		1	Violating excise law	Fine $150.
		1	“ “	“ 25.
	1882.			
Oyer & Ter..	February ..	1	“ “	“ 150.
Sessions....	May..	1	Assault and battery	“ 40.
		1	Embezzlement	“ 200.
		1	Grand larceny............	State prison 2 years.
		1	“	State reformatary.
		2	Violating excise law	Fine $50.
Sessions....	September.	1	“ “	“ 100.

COUNTY OF MONROE.

COURTS.	Date of conviction.	Number of convictions.	Offense.	Sentence.
	1881.			
Sessions....	November..	1	Assault and battery	Fine $200.
		1	Burglary	State reformatory.
		1	“ 2d degree	Penitentiary 2 years.
		1	“ 3d “	“ 3 years.
		1	“ 3d “	State prison 2 years 6 mos.
		1	Larceny from person......	“ 2 years.
		1	“ “	Penitentiary 3 years.
		1	“ “	“ 9 months.

Table A.—County of Monroe — (Continued).

COURTS.	Date of conviction.	Number of convictions.	Offense.	Sentence.
	1881.			
Sessions....	November..	1	Malicious trespass	Fine $75.
		1	Petit larceny	Penitentiary 6 mos.
		1	" 2d offense	State prison 5 years.
		1	" "	" 1 year 3 mos.
	1882.			
Oyer & Ter.	January ...	1	Assault to kill	Suspended.
		1	Forgery	"
		1	Grand larceny	State reformatory.
		1	Murder, 2d degree	State prison, life.
		1	Petit larceny, 2d offense.	Penitentiary 1 year.
Sessions....	January ...	1	Arson, 3d degree	State prison 4 years.
		1	Assault to harm	Penitentiary 3 years.
		2	Burglary, 3d degree	" 3 years.
		1	" and larceny	" 2 years.
		1	Grand larceny	State prison 5 years.
		1	"	Penitentiary 2 years.
		1	Larceny	" 9 mos.
		1	"	" 6 mos.
		1	" 2d offense	State prison 5 years.
		1	Petit larceny	Fine $50.
		1	"	" 25.
		1	Receiving stolen goods	Penitentiary 3 years.
		1	Selling lottery tickets	Fine $25.
Sessions ...	March.....	1	Assault to ravish	Penitentiary 3 years.
		1	Burglary, 3d degree	State prison 5 years.
		1	" and larceny	" 5 years.
		1	Grand larceny	" 2 years 6 mos.
		2	" 2d offense	" 8 years.
		1	" "	Penitentiary 3 years.
		1	Petit larceny	" 6 mos.
		1	Receiving stolen goods	" 3 years.
		1	" "	" 2 mos.
		1	Robbery	State prison 7 years.
		1	Selling liquor without lic'n.	Fine $5.
Oyer & Ter.	March.....	1	Grand larceny	State prison 3 years.
		1	Larceny from person	State reformatory.
		2	Receiving stolen goods	"
Oyer & Ter.	June	2	Arson, 1st degree	"
		1	Burglary, 3d degree	State prison 5 years.
		1	False pretenses	Penitentiary 60 days.
		1	Forgery	" 18 mos.
		1	Grand larceny	" 6 mos.
		1	"	State reformatory.
		1	Petit larceny	House of refuge.
			COUNTY OF NEW YORK.	
	1881.			
Sessions....	November..	1	Assault and battery	Penitentiary 30 days.
		5	" "	" 1 year.
		5	" "	" 6 mos.
		1	" "	" 2 mos.
		1	" "	Pen'y 1 year and $150 fine.
		1	" "	" " 100 fine.
		1	" "	Penitentiary 60 days.
		2	" to harm	State prison 3 years 6 mos.
		1	" "	" 4 years 6 mos.
		1	" "	State reformatory.
		2	" "	State prison 2 years.
		1	" "	House of refuge.
		1	" to ravish	State prison 2 years 6 mos.
		1	" to injure	Penitentiary 1 year.

Table A.— County of New York —(Continued).

COURTS.	Date of conviction.	Number of convictions.	Offense.	Sentence.
Sessions....	1881. November..	1	Attempt at grand larceny..	State reformatory.
		1	" P. L. from pers.	State prison 1 year 6 mos.
		1	" burglary, 2d deg	" 3 years 6 mos.
		1	Bigamy..................	" 1 year.
		1	Burglary, 3d degree......	" 3 years 6 mos.
		4	" "	" 2 years 6 mos.
		1	" "	" 18 mos.
		1	" "	" 5 years.
		1	" "	" 14 mos.
		3	" "	" 1 year.
		2	" "	Penitentiary 1 year.
		3	" "	State reformatory.
		2	False pretenses...........	Penitentiary 1 year.
		1	"	State prison 3 years.
		1	"	" 2 years 6 mos.
		1	"	Penitentiary 3 mos.
		4	Grand larceny...........	State prison 2 years 6 mos.
		11	"	State reformatory.
		1	"	House of refuge.
		2	"	Penitentiary 1 year.
		1	"	" 2 years 6 mos.
		1	"	" 6 mos.
		2	"	State prison 1 year.
		2	"	" 2 years.
		1	"	" 4 years.
		2	"	" 3 years 6 mos.
		2	"	" 3 years.
		1	"	" 5 years.
		1	"	" 18 mos.
		1	Misdemeanor	Fine $100.
		1	Manslaughter, 4th degree..	Penitentiary 2 years.
		1	Murder, 2d degree........	State prison, life.
		1	Petit larceny.............	City prison 30 days.
		1	"	" 60 days.
		1	"	" 10 days.
		3	"	Penitentiary 4 mos.
		10	"	" 6 mos.
		8	"	" 3 mos.
		2	"	" 5 mos.
		1	"	Pen'y 6 mos. and $100 fine.
		1	"	" " 50 fine.
		1	"	House of refuge.
		3	" from person..	State reformatory.
		2	" " ..	State prison 2 years 6 mos.
		1	" " ..	" 3 years.
		1	" " ..	" 4 years.
		1	" " ..	" 5 years.
		1	" " .	" 4 years 6 mos.
		2	Receiving stolen goods....	" 1 year.
		1	Rape....................	" 12 years.
Oyer & Ter.	November..	1	Murder, 1st degree.......	Death.
		2	Manslaughter, 3d degree..	State prison 4 years.
		1	" " ..	State reformatory.
		1	" " ..	Penitentiary 4 years.
Sessions....	December..	3	Assault and battery.......	" 6 mos.
		2	" "	" 3 mos.
		3	" "	" 1 year.
		1	" "	Pen'y 1 year and $150 fine.
		1	" "	" " 100 fine.
		1	" "	Pen'y 3 mos. and $50 fine.
		2	" " to kill..	State prison 10 years.

Table A.— County of New York — (Continued).

COURTS.	Date of conviction.	Number of convictions.	Offense.	Sentence.
Sessions....	1881. December .	2	Assault to harm	State prison 2 years 6 mos.
		1	“	“ 3 years.
		1	Assault to injure	“ 3 years 6 mos.
		1	Attempt at burg., 3d degree	Penitentiary 3 mos.
		1	“ “	“ 1 year.
		2	“ “	State prison 2 years 6 mos.
		2	“ petit larceny	Penitentiary 1 mo.
		1	“ P.L. from pers.	“ 6 mos.
		1	“ “	State prison 1 year 6 mos.
		1	Bigamy	Not stated.
		3	Burglary, 3d degree	State prison 2 years 6 mos.
		2	“ “	“ 3 years 6 mos.
		2	“ “	“ 1 year 6 mos.
		2	“ “	“ 4 years 6 mos.
		3	“ “	“ 2 years.
		2	“ “	“ 3 years.
		5	“ “	“ 4 years.
		2	“ “	“ 5 years.
		5	“ “	Penitentiary 1 year.
		5	“ “	State reformatory.
		1	False pretenses	“
		1	“	Penitentiary 3 mos.
		1	Forgery, 3d degree	State prison 4 years.
		6	Grand larceny	State reformatory.
		1	“	House of refuge.
		2	“	Penitentiary 1 year.
		1	“	“ 1 year 6 mos.
		3	“	State prison 1 year 6 mos.
		2	“	“ 2 years.
		2	“	“ 2 years 6 mos.
		1	“	“ 3 years.
		1	“	“ 3 years 6 mos.
		3	“	“ 4 years.
		1	“	“ 4 years 6 mos.
		1	Misdemeanor	Fine $25.
		1	“	City prison 30 days.
		4	“	Fine $50.
		2	“	“ 150.
		1	“	“ 5.
		1	“	Pen'y 10 days and $100 fine.
		1	Manslaughter, 1st degree	State prison 15 years.
		1	“ “	“ 25 years.
		1	“ 3d degree	“ 3 years 6 mos.
		3	Petit larceny	Penitentiary 1 mo.
		3	“	“ 2 mos.
		7	“	“ 3 mos.
		3	“	“ 4 mos.
		1	“	“ 5 mos.
		15	“	“ 6 mos.
		1	“	Pen'y 6 mos. and $100 fine.
		1	“	Penitentiary 10 days.
		1	“	City prison 10 days.
		1	“	“ 5 days.
		1	“	“ 1 day.
		2	“	Fine $25.
		1	“	Not stated.
		1	“ from person	State prison 1 year.
		1	“ “	“ 1 year 6 mos.
		2	“ “	“ 2 years.
		2	“ “	“ 2 years 6 mos.
		1	“ “	“ 3 years.

Table A. — County of New York — (Continued).

COURTS.	Date of conviction.	Number of convictions.	Offense.	Sentence.
Sessions....	1881. December..	1	Petit larceny from person..	State prison 3 years 6 mos.
		3	" " ..	" 5 years.
		3	" " ..	State reformatory.
		3	" " ..	Penitentiary 1 year.
		2	" " ..	House of refuge.
		1	Receiving stolen goods....	State reformatory.
		2	" "	State prison 2 years.
		1	" "	" 2 years 6 mos.
		1	" "	" 4 years 6 mos.
		1	" "	Not stated.
		1	Robbery, 1st degree.......	State prison 15 years.
Sessions....	1882. January ...	1	Assault and battery	Penitentiary 1 year.
		1	" "	" 30 days.
		1	" "	Pen'y 1 year and $150 fine.
		1	" "	City prison 30 days.
		1	" "	Penitentiary 30 days.
		1	" "	Pen'y 1 year and $100 fine.
		1	" " to kill.	State prison 8 years.
		1	" to harm	" 3 years.
		1	" "	" 4 years 6 mos
		2	" "	" 5 years.
		3	" "	State reformatory.
		1	" to injure	State prison 3 years 6 mos.
		1	" "	" 5 years.
		1	Attempt at burg. 3d degree	" 1 year.
		2	" " 3d "	" 1 year 6 mos.
		2	" " 3d "	" 2 years.
		1	" " 3d "	State reformatory.
		1	" grand larceny..	State prison 1 year 6 mos.
		1	" " ..	" 2 years.
		1	" P. L. from per.	" 2 years.
		1	Abortion	" 4 years.
		1	Burglary, 3d degree.......	" 1 year.
		1	" 3d "	" 1 year 6 mos.
		2	" 3d "	" 2 years.
		3	" 3d "	" 2 years 6 mos.
		2	" 3d "	" 3 years 6 mos.
		4	" 3d "	" 4 years.
		3	" 3d "	" 5 years.
		1	" 3d "	" 18 months.
		4	" 3d "	State reformatory.
		2	" 3d "	House of refuge.
		1	" 3d "	Not stated.
		1	Embezzlement	State prison 2 years 6 mos.
		1	"	Penitentiary 1 year.
		2	False pretenses............	State prison 3 y. & $250 f'e.
		1	"	" 2 years.
		1	"	Penitentiary 30 days.
		1	Felony	State prison 1 year.
		1	Forgery, 3d degree........	State reformatory.
		3	Grand larceny............	State prison 1 year.
		1	"	" 1 year 1 mth.
		4	"	" 1 year 6 mos.
		4	"	" 2 years.
		8	"	" 2 years 6 mos.
		1	"	" 3 years.
		2	"	" 3 years 6 mos.
		2	"	" 4 years.
		1	"	" 4 years 6 mos.
		1	"	" 5 years.
		2	"	" 18 months.

Table A. — County of New York — (Continued).

COURTS.	Date of conviction.	Number of convictions.	Offense.	Sentence.
Sessions....	1882. January....	5	Grand larceny...........	Penitentiary 1 year.
		2	“	“ 1 year 6 mos.
		5	“	State reformatory.
		2	“	Not stated.
		1	“ from person	State prison 2 years 6 mos.
		1	Manslaughter, 2d degree...	Penitentiary 7 years.
		2	“ 3d “ ...	State prison 4 years.
		1	“ 4th “ ...	“ 2 years.
		1	Misdemeanor	Penitentiary 2 mos.
		1	“	Fine $250.
		1	“	“ 25.
		1	“	“ 15.
		1	Murder, 2d degree........	State prison life.
		6	Petit larceny..............	City prison 10 days.
		1	“	“ 20 days.
		1	“	“ 30 days.
		1	“	Penitentiary 30 days.
		1	“	“ 60 days.
		11	“	“ 3 months.
		1	“	“ 4 months.
		1	“	“ 5 months.
		18	“	“ 6 months.
		2	“	“ 6 m. & $100 fe.
		1	“	Not stated.
		1	“ from person..	Penitentiary 1 year.
		1	“ “ ..	“ 1 year 6 mos.
		5	“ “ ..	State reformatory.
		1	“ “	House of refuge.
		1	“ “ ..	State prison 1 year 6 mos.
		1	“ “ ..	“ 2 years.
		1	“ “ ..	“ 2 years 6 mos.
		3	“ “ ..	“ 5 years.
		1	Rape.................. ..	“ 15 years.
		1	Receiving stolen goods....	“ 2 years 6 mos.
		1	“ “	“ 3 years 6 mos.
		1	“ “	Penitentiary 1 year 1 mth.
		1	“ “	House of refuge.
		1	Robbery, 1st degree.......	State prison 15 years.
Oyer & Ter..	February ..	1	Manslaughter, 3d degree...	“ 3 years.
Sessions....	February ..	1	Assault and battery	Penitentiary 1 year.
		1	“ “	Pen'y 1 year and $150 fine.
		1	“ “	“ 1 year and $250 fine.
		2	“ to harm	State prison 4 years.
		1	“ “	“ 5 years.
		1	“ to injure	“ 3 years 6 mos.
		1	Attempt at burg. 3d degree	“ 2 years 3 mos.
		4	“ “ 3d “	“ 2 years 6 mos.
		2	“ “ 3d “	Penitentiary 6 months.
		4	“ grand larcecy..	State prison 1 year 6 mos.
		1	“ “ ..	“ 2 years 6 mos.
		1	Bigamy	“ 3 years 6 mos.
		4	Burglary, 3d degree.......	“ 2 years.
		4	“ 3d “	“ 2 years 6 mos.
		1	“ 3d “	“ 3 years.
		2	“ 3d “	“ 4 years.
		3	“ 3d “	“ 5 years.
		6	“ 3d “	State reformatory.
		1	“ 3d “	Penitentiary 1 year 6 mos.
		1	Embezzlement............	State prison 1 year 6 mos.
		1	False pretenses	“ 2 years.
		1	“	Penitentiary 1 year.
		1	Felony	Pen'y 1 year and $150 fine.

Table A. — County of New York — (Continued).

COURTS.	Date of conviction.	Number of convictions.	Offense.	Sentence.
Sessions....	1882. February..	1	Grand larceny...........	Penitentiary 1 year.
		1	"	" 1 year 6 mos.
		1	"	" 3 years.
		1	"	" 3 years 6 mos.
		6	"	State reformatory.
		2	"	State prison 2 years 6 mos.
		3	"	" 1 year.
		3	"	" 2 years.
		2	"	" 1 year 6 mos.
		1	"	" 3 years.
		1	"	" 5 years.
		1	Manslaughter, 1st degree..	" life.
		1	" 1st " ..	" 4 years.
		2	Misdemeanor	Pen'y 10 days and $1 fine.
		1	"	Fine $10.
		1	"	" 250.
		1	Murder, 1st degree	Death.
		7	Petit larceny.............	Penitentiary 6 months.
		1	"	" 6 m. & $50 fi'e.
		1	"	" 6 m. & 150 fi'e.
		3	"	" 3 months.
		1	"	" 5 months.
		3	"	" 2 months.
		1	"	" 30 days.
		4	"	House of refuge.
		1	"	State reformatory.
		1	"	City prison 5 days.
		2	"	" 30 days.
		1	" from person..	State prison 1 year 6 mos.
		2	" " ..	" 2 years.
		2	" " ..	" 3 years 6 mos.
		1	" " ..	" 4 years 6 mos.
		1	" " ..	State reformatory.
		1	" " ..	House of refuge.
		1	" " ..	Penitentiary 1 year 6 mos.
		1	" " ..	" 1 year.
		1	Receiving stolen goods....	" 4 months.
		2	" " ...	State reformatory.
		1	" "	State prison 1 year 6 mos.
		1	" "	" 2 years.
		1	" "	" 2 years 6 mos.
		1	Robbery, 1st degree.......	" 5 years.
Sessions....	March.....	1	Assault..................	Penitentiary 3 months.
		1	"	" 1 year.
		1	"	" 1 y. & $250 f'e.
		1	" and battery........	" 1 year.
		1	" "	" 6 months.
		1	" "	Fine $25.
		1	" " to kill...	State prison 8 years.
		1	Attempt at burg. 3d degree	" 1 year.
		2	" " 3d "	" 1 year 6 mos.
		1	" " 3d "	" 2 years.
		2	" " 3d "	" 2 years 6 mos.
		1	" " 3d "	Penitentiary 1 month.
		1	" " 3d "	" 6 months.
		1	" " 3d "	" 1 year 6 mos.
		1	" " 3d "	" 1 year.
		1	" crime agst. nat.	State prison 1 year.
		2	" burg. 1st degree	" 8 years.
		1	" grand larceny..	" 2 years.
		1	" " ..	Penitentiary 1 year.
		1	" " ..	" 1 year 6 mos.

Table A.— County of New York —(Continued).

COURTS.	Date of conviction.	Number of convictions.	Offense.	Sentence.
Sessions....	1882. March.....	2	Attempt at petit larceny...	Penitentiary 1 year 3 mos.
		1	“ “ ...	City prison 15 days.
		1	“ P. L. from per.	State prison 1 year 6 mos.
		1	“ “ .	“ 1 year.
		1	“ “ .	Penitentiary 1 year.
		1	“ “ .	“ 1 year 3 mos.
		1	“ robbery 1st deg.	State prison 3 years.
		1	Bigamy....................	“ 1 year.
		1	Burglary, 2d degree........	“ 2 years 6 mo.
		3	“ “	“ 5 years.
		1	“ “	“ 7 years 6 mos.
		1	“ 3d “	“ 1 year.
		1	“ “	“ 1 year 6 mos.
		1	“ “	“ 18 months.
		4	“ “	“ 2 years.
		5	“ “	“ 3 years.
		1	“ “	“ 4 years.
		3	“ “	State reformatory.
		2	“ “	House of refuge
		1	“ “	Penitentiary 3 years.
		2	Conspiracy...............	City prison 10 days.
		1	Embezzlement............	State reformatory.
		2	False pretenses............	State prison 1 year.
		1	“	Penitentiary 6 months.
		1	“	“ 30 days.
		3	Grand larceny............	“ 1 year.
		4	“	State prison 1 year.
		3	“	“ 2 years.
		2	“	“ 5 years.
		7	“	State reformatory.
		2	“	House of refuge.
		1	Misdemeanor..............	Pen'y 1 year and $250 fine.
		1	“	“ 60 days and $250 fine.
		1	“	“ 30 days and $100 fine.
		1	“	Penitentiary 6 months.
		2	“	City prison 5 days.
		4	“	Fine $1.
		6	“	“ 5.
		6	“	“ 10
		3	“	“ 20.
		2	“	“ 25.
		1	“	“ 150.
		2	Petit larceny.............	City prison 5 days.
		1	“	“ 10 days.
		1	“	Penitentiary 2 months
		2	“	“ 3 months.
		4	“	“ 4 months.
		7	“	“ 6 months.
		3	“ from person..	“ 1 year.
		1	“ “ ..	“ 1 year 6 mos.
		1	“ “ ..	State prison 1 year.
		2	“ “ ..	“ 1 year 6 mos.
		5	“ “ ..	“ 2 years.
		1	“ “ ..	“ 3 years.
		1	“ “ ..	“ 5 years.
		3	“ “ ..	State reformatory.
		1	Robbery, 1st degree.......	State prison 5 years.
		1	“ “	“ 10 years.
Sessions....	April......	1	Abduction................	Penitentiary 2 years.
		1	Arson, 3d degree..........	State prison 5 years 6 mos.
		2	Assault and battery.......	Penitentiary 1 year.
		1	“ “	Pen'y 1 year and $250 fine.

Table A. — County of New York — (Continued).

COURTS.	Date of conviction.	Number of convictions.	Offense.	Sentence.
	1882.			
Sessions	April	1	Assault and battery	Pen'y 1 year and $100 fine.
		1	“ “	“ “ $50 fine.
		2	“ “	Penitentiary 60 days.
		1	“ “	“ 6 months.
		1	“ to harm	State prison 2 years 6 mos.
		1	“ “	“ 3 years 6 mos.
		2	“ “	“ 4 years.
		1	“ to kill	“ 10 years.
		1	“ to injure	“ 4 years.
		1	Attempt at burg. 3d degree.	“ 1 year 3 mos.
		1	“ “	“ 1 year 6 mos.
		3	“ “	“ 2 years 6 mos.
		1	“ “	Penitentiary 1 year 6 mos.
		1	“ grand larceny	“ 3 mos.
		2	“ “	State prison 2 years.
		1	“ “	“ 1 year 6 mos.
		1	“ petit larceny	Penitentiary 2 mos.
		1	“ “	“ 3 mos.
		1	“ P. L. from pers.	“ 2 years 6 mos.
		1	“ “	State prison 2 years 6 mos.
		1	“ “	“ 1 year 6 mos.
		1	Burglary, 3d degree	“ 15 months.
		1	“ “	“ 18 months.
		1	“ “	“ 1 year.
		1	“ “	“ 1 year 6 mos.
		3	“ “	“ 2 years.
		4	“ “	“ 2 years 6 mos.
		2	“ “	“ 3 years.
		2	“ “	“ 3 years 6 mos.
		4	“ “	“ 4 years.
		4	“ “	State reformatory.
		2	“ “	House of refuge.
		1	Embezzlement	State prison 2 years 6 mos.
		1	False pretenses	Penitentiary 6 months.
		1	“	Pen'y 6 mos. and $60 fine.
		1	Forgery, 3d degree	Penitentiary 3 years.
		1	“ “	State prison 4 years.
		1	“ “	State reformatory.
		1	Grand larceny	State prison 1 year.
		1	“	“ 1 year 2 mos.
		3	“	“ 2 years.
		3	‘	“ 2 years 6 mos.
		1	“	“ 3 years 6 mos.
		1	“	“ 4 years.
		3	“	“ 4 years 6 mos.
		2	“	State reformatory.
		1	“	Penitentiary 1 year.
		1	“ from person.	State prison 3 years 6 mos.
		2	Manslaughter, 3d degree	“ 4 years.
		1	Misdemeanor	City prison 5 days.
		1	“	Pen'y 10 days and $10 fine.
		2	“	“ 20 days and $10 fine.
		1	“	“ 30 days and $1 fine.
		3	“	“ 30 days and $250 fine.
		2	“	Penitentiary 6 months.
		3	“	“ 1 year.
		6	“	Fine $10.
		1	“	“ 50.
		1	“	“ 100.
		1	Murder, 1st degree	Death.
		1	“ 2d “	State prison life.
		1	Petit larceny	City prison 60 days.

Table A.— County of New York — (Continued).

COURTS.	Date of conviction.	Number of convictions.	Offense.	Sentence.
Sessions....	1882. April......	2	Petit larceny	Penitentiary 60 days.
		4	"	" 3 months.
		1	"	" 4 months.
		9	"	" 6 months.
		2	"	Pen'y 6 mos. and $50 fine.
		1	"	" 6 mos. and $100 fine.
		1	" from person	Penitentiary 5 years.
		2	" "	House of refuge.
		2	" "	State prison 18 mos.
		1	" "	" 2 years 6 mos.
		1	" "	" 2 years.
		2	" "	" 3 years.
		1	" "	" 4 years.
		2	" "	State reformatory.
		1	Rape	State prison 20 years.
		1	Robbery, 1st degree	" 5 years.
		2	" "	" 7 years.
Sessions....	May.......	1	Assault and battery	City prison 30 days.
		2	" "	Penitentiary 1 month.
		3	" "	" 3 months.
		4	" "	" 6 months.
		2	" "	" 1 year.
		2	" "	Pen'y 1 year and $100 fine.
		1	" "	" 1 year and $250 fine.
		1	" " to kill	State prison 10 years.
		1	" " to inj'r.	" 2 years 6 mos.
		1	" " "	Penitentiary 1 year.
		2	Attempt at burg. 3d degree.	State prison 2 years.
		1	" "	" 3 years.
		1	" P. L. from pers.	" 1 year 6 mos.
		1	Bigamy	" 1 year 3 mos.
		1	"	" 1 year.
		1	Burglary, 1st degree	" 5 years.
		3	" 3d degree	" 1 year 6 mos.
		5	" "	" 2 years.
		5	" "	" 2 years 6 mos.
		2	" "	" 3 years.
		2	" "	State reformatory.
		3	" "	Penitentiary 1 year.
		1	" "	House of refuge.
		1	Embezzlement	Penitentiary 1 year.
		1	False pretenses	" 1 year.
		1	"	State prison 2 years 6 mos.
		4	"	" 3 years.
		1	Forgery, 3d degree	" 2 years 6 mos.
		1	" "	Penitentiary 1 year.
		1	" 4th degree	Not stated.
		2	Grand larceny	House of refuge.
		2	"	State reformatory.
		1	"	State prison 1 year 6 mos.
		1	"	" 2 years.
		3	"	" 2 years 6 mos.
		4	"	" 3 years.
		2	"	" 4 years 6 mos.
		1	"	Penitentiary 1 year.
		1	"	" 1 year 6 mos.
		3	Misdemeanor	" 1 year.
		1	"	Pen'y 1 year and $250 fine.
		1	"	" 60 days and $10 fine.
		1	"	" 6 mos. and $10 fine.
		2	"	Fine $10.
		1	"	" 100.

Table A. — County of New York — (Continued).

COURTS.	Date of conviction.	Number of convictions.	Offense.	Sentence.
Sessions....	1882. May.......	1	Misdemeanor	Fine $250.
		4	"	" 350.
		3	Petit larceny	City prison 10 days.
		1	"	" 30 days.
		1	"	" 1 month.
		6	"	Penitentiary 3 months.
		1	"	" 4 months.
		13	"	" 6 months.
		1	"	Not stated.
		1	" from person..	State prison 1 year.
		2	" " ..	" 1 year 6 mos.
		2	" " ..	" 2 years.
		3	" " .	" 2 years 6 mos.
		1	" " ..	" 3 years.
		1	" " ..	" 3 years 6 mos.
		1	" " ..	" 5 years.
		2	" " ..	State reformatory.
		2	" " ..	House of refuge.
		1	" " ..	Penitentiary 1 year.
		1	Receiving stolen goods....	State prison 2 years.
		2	Robbery, 1st degree.......	" 5 years.
Sessions....	June	1	Assault	Penitentiary 6 months.
		1	" and battery.......	" 6 months.
		1	" "	" 60 days.
		1	" "	" 1 year.
		1	" "	" 3 m. & $100 fe.
		1	" to injure.........	State prison 4 years.
		1	" to rape	" 20 years.
		1	Attempt at burg. 1st degree	" 3 years 6 mos.
		2	" 1st "	State reformatory.
		1	" 2d "	State prison 5 years.
		1	" 3d "	" 2 years.
		1	" 3d "	" 2 years 6 mos.
		1	" 3d "	Penitentiary 6 months.
		1	Attempt at grand larceny..	" 1 year.
		1	" " ..	State prison 2 years.
		1	" " ..	" 2 years 6 mos.
		1	" petit larceny...	City prison 10 days.
		1	" P. L. from per.	State reformatory.
		2	" " .	House of refuge.
		1	Burglary, 1st degree.......	State prison 5 years.
		2	" 2d "	" 2 years.
		1	" 2d "	" 7 years.
		1	" 2d "	" 10 years.
		1	" 2d "	State reformatory.
		1	" 3d "	"
		2	" 3d "	State prison 1 year.
		2	" 3d "	" 2 years.
		1	" 3d "	" 2 years 6 mos.
		1	" 3d "	" 3 years.
		1	" 3d "	" 3 years 6 mos.
		2	" 3d "	" 4 years.
		1	" 3d "	" 4 years 6 mos.
		1	" 3d "	" 5 years.
		4	" 3d "	Penitentiary 1 year.
		4	" 3d "	House of rufuge.
		1	Embezzlement	State reformatory.
		1	"	State prison 2 years 6 mos.
		1	False pretenses	" 2 years.
		1	"	Penitentiary 6 months.
		1	Forgery, 3d degree........	" 2 years 6 mos.
		1	" 3d "	State prison 2 years.

Table A. — County of New York — (Continued).

COURTS.	Date of conviction.	Number of convictions.	Offense.	Sentence.
	1882.			
Sessions....	June	1	Forgery, 3d degree	State reformatory.
		1	Grand larceny	"
		2	"	State prison 1 year.
		2	"	" 2 years 6 mos.
		1	"	" 3 years.
		1	"	" 3 years 6 mos.
		1	"	" 5 years.
		4	"	Penitentiary 1 year.
		1	"	" 1 year 6 mos.
		3	"	House of refuge.
		1	"	Penitentiary 5 years.
		1	Misdemeanor	" 1 month.
		2	"	" 2 months.
		1	"	City prison 10 d. & $10 fine.
		1	"	" 10 days & 1 fine.
		1	"	Fine $10.
		2	"	" 25.
		3	"	" 100.
		1	Petit larceny	City prison 10 days.
		1	"	" 30 days.
		1	"	Penitentiary 30 days.
		2	"	" 2 months.
		4	"	" 3 months.
		1	"	" 5 months.
		14	"	" 6 months.
		2	"	House of refuge.
		1	" from person	Penitentiary 3 months.
		1	" "	" 18 months.
		1	" "	" 1 year.
		1	" "	" 1 year 6 mos.
		1	" "	State prison 2 years.
		3	" "	" 2 years 6 mos.
		2	" "	" 3 years.
		1	" "	" 3 years 6 mos.
		1	" "	" 5 years.
		2	Receiving stolen goods	Penitentiary 6 months.
		2	Robbery, 1st degree	State prison 7 years.
Sessions....	July.......	1	Assault	Penitentiary 4 months.
		1	" and battery	" 4 months.
		1	" "	" 6 months.
		1	" "	" 1 year.
		1	" " to rape.	State prison 5 years.
		2	" to harm	" 1 year.
		1	" "	" 2 years.
		2	" "	" 4 years.
		1	" "	" 5 years.
		2	" "	Penitentiary 1 year.
		1	Attempt at burg. 3d degree	House of refuge.
		1	Bigamy	State prison 3 years.
		1	Burglary, 3d degree.	" 2 years.
		1	" 3d "	" 3 years 6 mos.
		1	" 3d "	" 4 years.
		1	" 3d "	" 4 years 6 mos.
		1	" 3d "	" 18 months.
		4	" 3d "	House of refuge.
		1	False pretense	Penitentiary 1 year.
		1	"	State reformatory.
		1	"	State prison 2 years.
		1	Forgery, 3d degree	" 1 year.
		1	" 3d "	" 5 years.
		1	" 3d "	Penitentiary 1 year.
		3	Grand larceny	" 1 year.

Table A. — County of New York — (Continued).

COURTS.	Date of conviction.	Number of convictions.	Offense.	Sentence.
Sessions....	1882. July.......	4	Grand larceny...........	State prison 1 year.
		5	"	" 18 months.
		5	"	" 2 years 6 mos.
		1	"	" 3 years 6 mos.
		1	"	" 4 years.
		3	"	State reformatory.
		1	"	House of refuge.
		2	" from person.	State reformatory.
		1	" " .	State prison 4 years.
		1	Petit larceny	Penitentiary 30 days.
		3	"	" 2 months.
		3	"	" 3 months.
		1	"	" 4 months.
		7	"	" 6 months.
		1	"	House of refuge.
		1	" from person..	"
		2	" " ..	State reformatory.
		1	" " ..	State prison 1 year.
		1	" " ..	" 18 months.
		1	" " ..	" 2 years 6 mos.
		1	" " ..	" 3 years.
		1	" " ..	" 4 years.
		1	" " ..	" 4 years 6 mos.
		2	" " ..	" 5 years.
		1	" " ..	Penitentiary 1 year.
		1	Rape.....	State prison 15 years.
		1	Robbery, 1st degree.......	" 5 years.
		1	" 1st "	" 8 years.
		2	" 1st "	Penitentiary 5 years.
Sessions....	August....	2	Assault and battery.......	" 1 year.
		1	" "	" 6 months.
		1	" "	" 3 months.
		1	" "	Fine $25.
		1	" to harm............	State prison 1 year.
		1	" "	Penitentiary 1 year.
		1	Attempt at burg. 3d degree	" 1 year.
		1	" 3d "	State prison 2 years.
		1	" petit larceny...	Penitentiary 3 months.
		1	Burglary, 3d degree.......	" 1 year.
		1	" 3d "	State prison 1 year.
		1	" 3d "	" 1 year 6 mos.
		2	" 3d "	" 2 years.
		1	" 3d "	" 2 years 6 mos.
		2	" 3d "	" 4 years.
		2	" 3d "	State reformatory.
		1	Embezzlement	Penitentiary 3 mos.
		1	False pretense	" 3 months.
		1	Forgery, 3d degree........	" 2 years.
		1	" 3d "	State prison 1 year.
		1	" 4th "	State reformatory.
		5	Grand larceny............	"
		3	"	Penitentiary 1 year.
		3	"	State prison 1 year.
		5	"	" 1 year 6 mos.
		5	"	" 2 years.
		1	"	" 2 years 6 mos.
		1	"	" 4 years.
		1	Manslaughter, 2d degree...	" 4 years.
		1	" 3d " ...	" 2 years.
		2	Misdemeanor	Penitentiary 1 month.
		1	"	Fine $5.
		1	"	" 10.
		1	Petit larceny..............	City prison 1 month.

Table A.— County of New York — (Continued).

COURTS.	Date of conviction.	Number of convictions.	Offense.	Sentence.
Sessions....	1882. August....	6	Petit larceny..............	Penitentiary 2 mos.
		5	“	“ 3 mos.
		2	“	“ 4 mos.
		15	“	“ 6 mos.
		1	“	“ 1 year.
		2	“ from person..	“ 1 year.
		1	“ “ ..	“ 1 year 6 mos.
		1	“ “ ..	“ 2 years 6 mos.
		2	“ “ ..	State prison 1 year.
		2	“ “ ..	“ 1 year 6 mos.
		4	“ “ ..	“ 2 years.
		3	“ “ ..	“ 2 years 6 mos.
		1	“ “ ..	“ 3 years.
		6	“ “ ..	“ 4 years.
		3	“ “ ..	“ 5 years.
		2	“ “ ..	State reformatory.
		1	“ “ ..	House of refuge.
Sessions....	September.	4	Assault and battery........	Penitentiary 1 year.
		1	“ “	Pen’y 1 year and $150 fine.
		3	“ “	“ 1 year and $250 fine.
		1	“ to harm...........	Penitentiary 4 mos.
		2	“ “	State prison 5 years.
		1	“ to injure..........	“ 5 years.
		1	“ “	“ 4 years.
		1	“ to rape............	“ 2 years 6 mos.
		1	Attempt at burg. 3d deg...	“ 1 year.
		2	“ “ 3d “...	“ 1 year 6 mos.
		1	“ “ 3d “...	“ 2 years.
		3	“ “ 3d “...	“ 2 years 6 mos.
		1	“ at grand larceny..	Penitentiary 6 mos.
		1	“ at P. L. from pers.	State prison 18 mos.
		1	Burglary, 1st degree......	“ 5 years.
		1	“ 2d “	“ 8 years.
		1	“ 3d “	“ 1 year.
		2	“ 3d “	“ 1 year 6 mos.
		1	“ 3d “	“ 18 mos.
		1	“ 3d “	“ 2 years.
		2	“ 3d “	“ 2 years 6 mos.
		1	“ 3d “	“ 3 years.
		3	“ 3d “	“ 4 years.
		2	“ 3d “	“ 4 years 6 mos.
		4	“ 3d “	State reformatory.
		2	“ 3d “	House of refuge.
		1	False pretenses............	“
		1	“	City prison 15 days.
		1	“	“ 30 days.
		2	“	Fine $10.
		1	“	Pen’y 1 year and $50 fine.
		1	“	State prison 18 mos.
		1	“	“ 2 years 6 mos.
		1	Forgery, 3d degree........	“ 1 year.
		1	“ 3d “	“ 18 mos.
		1	“ 3d “	“ 1 year.
		1	“ 3d “	“ 3 years.
		1	“ 3d “	“ 5 years.
		1	“ 3d “	State reformatory.
		8	Grand larceny............	“
		4	“	State prison 1 year.
		2	“	“ 1 year 6 mos.
		3	“	“ 2 years.
		6	“	“ 2 years 6 mos
		1	“	“ 3 years 6 mos

Table A. — County of New York — (Continued).

COURTS.	Date of conviction.	Number of convictions.	Offense.	Sentence.
Sessions....	1882. September.	2	Grand larceny	State prison 4 years.
		1	"	" 4 years 6 mos.
		1	"	" 4 years 9 mos.
		1	"	Penitentiary 1 year 6 mos.
		1	"	" 2 years 6 mos.
		1	"	" 5 years.
		2	"	House of refuge.
		1	" from pers...	State reformatory.
		1	" " ...	Penitentiary 5 years.
		1	Manslaughter, 2d degree...	State prison 7 years.
		1	" 4th " ...	" 2 years.
		1	" 4th " ...	Penitentiary 6 mos.
		1	Misdemeanor	" 1 year.
		1	Murder, 1st degree	Death.
		1	Perjury	State prison 1 year.
		2	Petit larceny	City prison 10 days.
		4	"	Penitentiary 30 days.
		2	"	" 60 days.
		1	"	" 90 days.
		1	"	" 2 mos.
		7	"	" 3 mos.
		2	"	" 4 mos.
		1	"	" 5 mos.
		11	"	" 6 mos.
		2	"	Pen'y 6 mos. and $50 fine.
		1	"	" 6 mos. and 100 fine.
		1	" from person..	Penitentiary 60 days.
		1	" " ..	" 1 year.
		1	" " ..	" 1 year 6 mos.
		1	" " ..	" 2 years 6 mos.
		1	" " ..	State prison 1 year.
		2	" " ..	" 18 mos.
		2	" " ..	" 2 years 6 mos.
		2	" " ..	" 3 years 6 mos.
		2	" " ..	" 4 years.
		3	" " ..	State reformatory.
		2	" " ..	House of refuge.
		2	" " ..	State prison 5 years.
		1	Robbery, 1st degree	" 20 years.
Sessions....	October ...	1	Assault	Penitentiary 6 mos.
		1	" and battery	" 1 month.
		2	" "	" 3 months.
		3	" "	" 6 months.
		1	" "	" 8 months.
		1	" "	" 1 year.
		1	" "	Pen'y 1 year and $50 fine.
		1	" "	" 1 year and $100 fine.
		1	" "	City pris. 30 d. and $30 fine.
		2	" "	Fine $25.
		1	" " to kill..	State prison 10 years.
		1	" to harm	" 2 years.
		1	" "	" 2 years 6 mo.
		1	" "	" 4 years.
		1	" "	" 4 years 6 mos.
		2	" "	" 5 years.
		1	" to ravish	" 5 years.
		1	Attempt at burg. 2d degree.	" 2 years 6 mos.
		1	" " 2d "	" 3 years.
		4	" " 3d "	" 1 year 6 mos.
		1	" " 3d "	House of refuge
		1	" at G. L. from per.	State prison 5 years.
		1	Burglary, 1st degree	" 10 years.

Table A.— County of New York — (Continued).

COURTS.	Date of conviction.	Number of convictions.	Offense.	Sentence.
Sessions...	1882. October ...	3	Burglary, 3d degree	State prison 1 year.
		2	" 3d "	" 1 year 6 mos.
		1	" 3d "	" 2 years.
		6	" 3d "	" 2 years 6 mos.
		1	" 3d "	" 3 years.
		2	" 3d "	State reformatory.
		1	" 3d "	Penitentiary 1 year.
		1	Embezzlement	" 4 mos.
		1	False pretenses	" 1 year.
		1	"	State prison 1 year.
		1	Felony	" 1 year 6 mos.
		1	Forgery, 1st degree	" 7 years 6 mos.
		1	" 1st "	" 10 years.
		1	Grand larceny	" 1 year.
		3	"	" 1 year 6 mos.
		2	"	" 2 years.
		8	"	" 2 years 6 mos.
		2	"	" 3 years 6 mos.
		1	"	" 4 years 6 mos.
		5	"	" 5 years.
		2	"	State reformatory.
		1	"	Penitentiary 1 year.
		1	"	" 3 mos.
		1	"	" 1 year 6 mos.
		2	"	" 2 years.
		1	"	" 2 years 6 mos.
		1	"	" 3 years 6 mos.
		1	"	House of refuge.
		1	" from person.	State prison 6 years.
		1	Manslaughter, 1st degree	" 7 years.
		2	" 3d "	" 2 years.
		1	" 4th "	" 1 year.
		1	Misdemeanor	Penitentiary 1 month
		2	"	" 3 months.
		2	"	" 6 months.
		1	"	Pen'y 3 mos. and $50 fine.
		1	"	State prison 1 year.
		5	"	Fine $10.
		1	"	" 20.
		1	"	" 175.
		1	Petit larceny	City prison 30 days.
		1	"	Penitentiary 2 months.
		1	"	" 3 months.
		4	"	" 4 months.
		2	"	" 5 months.
		14	"	" 6 months.
		1	"	Pen'y 6 mos. and $100 fine.
		2	"	House of refuge.
		1	" from person	Penitentiary 3 months.
		3	" "	" 1 year.
		1	" "	" 1 year 6 mos.
		2	" "	State prison 1 year.
		3	" "	" 1 year 6 mos.
		1	" "	" 1 year 9 mos.
		3	" "	" 2 years.
		7	" "	" 2 years 6 mos.
		1	" "	" 3 years.
		1	" "	" 3 years 6 mos.
		2	" "	House of refuge.
		2	Robbery, 1st degree	State prison 5 years.
		1	" 1st "	" 15 years.

Table A. — (Continued).

COUNTY OF NIAGARA.

COURTS.	Date of conviction.	Number of convictions.	Offense.	Sentence.
Sessions ...	1881. December .	1	Assault and battery.......	Fine $100.
		2	Violating excise law	" 30.
Sessions....	1882. June	1	Larceny	State prison 2 years.
		1	" from person......	" 3 years.
		1	" "	" 3 years 6 mos.
		1	" "	Penitentiary 1 year.
Oyer & Ter..	June	1	Assault and battery.......	" 60 days.
		1	Burglary, 3d degree.......	State prison 3 years.
		2	Grand larceny............	" 4 years.
		1	Petit larceny from person..	Penitentiary 1 year.
		1	Stoning railroad train	" 61 days.
			COUNTY OF ONEIDA.	
Sessions....	1881. November .	1	Assault to harm...........	State prison 2 years 6 mos.
		1	" kill	State reformatory.
		1	Grand larceny...........	State prison 1 year 6 mos.
		1	Petit larceny	Fine $50.
Oyer & Ter..	1882. January ...	1	Murder, 1st degree........	Death.
Sessions....	April......	1	Assault to harm	Fine $50.
		1	" kill	State reformatory.
		1	Burglary, 3d degree.... .	State prison 1 year.
		2	Extortion.................	Pen'y 1 year and $250 fine.
		1	Larceny from person......	State prison 1 year.
		1	Receiving stolen goods....	" 2 years.
Oyer & Ter..	May..	2	Burglary and larceny......	State reformatory.
		1	Rape.....................	House of refuge.
			COUNTY OF ONONDAGA.	
Oyer & Ter..	1881. November..	1	Manslaughter, 3d degree..	State prison 4 years.
Sessions....	December..	2	Burglary, 1st degree.......	Penitentiary 10 years.
		1	" 3d "	" 2 years 6 mos.
		1	Forgery, 3d "	Penitentiary 3 years.
		1	Grand larceny	" 3 years.
		1	Embezzlement and larceny.	" 60 days.
		1	Robbery, 1st degree.......	" 5 years.
		1	Selling liquor on Sunday..	Fine $25.
Sessions....	1882. January....	1	Arson, 4th degree	State prison 4 years.
		1	Burglary, 3d degree	Penitentiary 2 years 6 mos.
		1	False pretenses	Fine $40.
		1	Grand larceny...........	Penitentiary 2 years 6 mos.
		1	"	" 2 years.
		1	"	State prison 5 years.
		1	Keeping bawdy house.....	Pen'y 1 year and $250 fine.
		1	Petit larceny............	Penitentiary 6 months.
		1	"	" 3 months.
		1	Selling liquor without lic..	Fine $40.
		1	" mort. prop. to def'd	Penitentiary 30 days.
Sessions....	April......	2	Assault and battery	Fine $50.
		1	Grand larceny	Penitentiary 2 years.
		1	Mayhem	" 7 years.
		1	Receiving stolen goods....	" 3 years.
		1	Robbery, 1st degree.......	State prison 10 years.
		1	Selling liquor without lic..	Fine $25.
Oyer & Ter..	March.....	1	Burglary, 2d degree	Penitentiary 3 years.
		1	" 3d "	State reformatory.

Table A.— County of Onondaga —(Continued).

COURTS.	Date of conviction.	Number of convictions.	Offense.	Sentence.
	1882.			
Oyer & Ter..	March	1	Burglary, 3d degree	Penitentiary 3 years.
		1	Petit larceny, 2d offense...	“ 3 years.
Oyer & Ter..	May.......	1	Burglary and petit larceny.	“ 1 year.
		1	Grand larceny...........	“ 3 years.
		1	“	“ 18 mos.
		1	Petit larceny, 2d offense...	“ 3 years.
Sessions....	June	1	Assault to kill	“ 10 years.
		1	Attempt at arson, 1st deg..	State prison 10 years.
		1	Burglary, 3d degree.......	State reformatory.
		1	“ 3d “	Penitentiary 3 years.
		4	Grand larceny...........	State prison 5 years.

COUNTY OF ONTARIO.

COURTS.	Date of conviction.	Number of convictions.	Offense.	Sentence.
	1882.			
Sessions....	January ...	1	Arson, 3d degree..........	State prison 4 years.
		1	False pretenses...........	Penitentiary 3 mos.
		1	Receiving stolen goods....	“ 3 mos.
		1	Violating excise law.......	Pen'y 3 mos. and $250 fine.
Oyer & Ter.	February..	2	Grand larceny	State reformatory.
		1	Violating excise law	Fine $25.
		1	“ “	“ 30.
Sessions...	March	1	Attempt at arson..........	State prison 2 years.
		1	Burglary	State reformatory.
		1	Robbery.....	State prison 15 years.
Oyer & Ter.	May.......	1	Burglary and larceny......	State reformatory.
		3	“ “	House of refuge.
		2	Violating excise law.......	Fine $25.
		1	“ “	“ 50.
Sessions....	June	1	Assault to kill............	State reformatory.
		1	Maintaining nuisance......	Fine $10.
Oyer & Ter.	October ...	1	Burglary and larceny.. ..	State prison 2 years.
		1	“ “	State reformatory.
		1	Carrying concealed weapon	Fine $25.

COUNTY OF ORANGE.

COURTS.	Date of conviction.	Number of convictions.	Offense.	Sentence.
	1881.			
Oyer & Ter..	November..	1	Grand larceny.....	State prison 1 year 6 mos.
Sessions....	December..	1	Assault to kill	“ 3 years 6 mos.
		1	Burglary, 1st degree	“ . 2 years.
		2	Grand larceny............	Penitentiary 1 year.
	1882.			
Sessions....	February ..	1	Burglary, 1st degree	State prison 5 years 6 mos.
		1	“ 2d “	Penitentiary 3 years 6 mos.
		1	“ 2d “	“ 2 years.
		1	Grand larceny	“ 1 year 6 mos.

COUNTY OF ORLEANS.

COURTS.	Date of conviction.	Number of convictions.	Offense.	Sentence.
	1881.			
Sessions....	November .	1	Assault and battery	Fine $50.
		1	Forgery	State reformatory.
		1	Rape	State prison 10 years.
	1882.			
Sessions....	March.....	1	Burglary, 3d degree.......	House of refuge.
		1	Resisting an officer........	Fine $25.
		4	Selling liquor without lic..	“ 50.
Oyer & Ter.	June	1	Incest	State prison 10 years.
		1	Rape................. ...	“ 20 years.
		1	Manslaughter, 4th degree..	“ 2 years.

Table A.— (Continued).

COUNTY OF OSWEGO.

COURTS.	Date of conviction.	Number of convictions.	Offense.	Sentence.
Sessions.	1881. December.	1	Assault and battery	Fine $20.
		1	Indecent exposure of pers'n	" 60.
		1	Rape	State prison 5 years.
		5	Selling liquor without lic.	Fine $30.
Sessions	1882. February	1	Assault and battery	" 15.
		1	" "	" 25.
		1	" "	" 100.

COUNTY OF OTSEGO.

COURTS.	Date of conviction.	Number of convictions.	Offense.	Sentence.
Sessions	1882. March	1	Assault to kill	State prison 3 years.
		1	" to rape	Penitentiary 6 mos.
		1	Burglary and larceny	State prison 1 year.
		1	" "	" 4 years.
		1	Keeping gambling room	Fine $50.
		1	Larceny	Penitentiary 6 mos.
		2	Misdemeanor	Fine $5.
		1	Robbery	State prison 7 years.
Sessions	June	1	Assault and battery	Fine $15.
		1	Bigamy	Penitentiary 1 year.
		1	Grand larceny	State reformatory.
		1	Larceny	Penitentiary 6 mos.
		1	Malicious trespass	Fine $20.
		3	Violating excise law	" 30.
Oyer & Ter.	September.	1	Assault to harm	State reformatory.
		2	Grand larceny	"

COUNTY OF QUEENS.

COURTS.	Date of conviction.	Number of convictions.	Offense.	Sentence.
Sessions	1881. November.	1	Assault and battery	Jail 20 days.
		4	" "	Fine $10.
		1	" to harm	State prison 1 year.
		1	Burglary	" 3 years 6 mos.
		2	Disturbing oyster beds	Penitentiary 6 months.
		1	" "	Fine $100.
		1	Felonious assault and bat.	Penitentiary 6 months.
		4	Keeping gambling house	Fine $75.
		1	Larceny	Penitentiary 6 mos.
		1	"	" 2 years.
		1	Nuisance	Abatement.
		1	Perjury	State prison 3 years.
Oyer & Ter.	1882. January	1	Assault and battery	Penitentiary 3 mos.
		1	Attempt at rape	" 6 mos.
		1	Burglary and larceny	" 6 mos.
		1	" "	State prison 1 year.
Sessions	March	4	Assault and battery	Fine $10.
		1	" "	Penitentiary 6 mos.
		1	Grand larceny	" 1 year 6 mos.
		1	Libel	Fine $250.
Oyer & Ter.	June	1	Grand larceny	House of refuge.
Sessions	July	1	Assault and battery	Fine $15.
		2	Burglary and larceny	State prison 2 years.
		1	Carrying concealed weapon	Jail 10 days.
		2	Robbery, 1st degree	State prison 20 years.
		1	Selling liquor on Sunday	Fine $50.

Table A.— (Continued).

COUNTY OF RENSSELAER.

COURTS.	Date of conviction.	Number of convictions.	Offense.	Sentence.
Sessions....	1881. December..	1	Burglary, 2d degree.......	State prison 10 years.
		2	" 3d "	Penitentiary 3 years.
		1	" 3d "	" 1 year.
		1	False pretenses...........	Jail 1 year.
		2	Forgery	State prison 4 years.
		1	Grand larceny............	Penitentiary 2 years.
		1	Manslaughter.	Jail 1 year.
Oyer & Ter..	December..	1	Bigamy	State prison 1 year.
Sessions....	1882. January....	1	Assault and battery	Fine $10.
		1	" "	Jail 3 months.
		1	" on officer..........	Fine $25.
		1	" to rape............	Penitentiary 5 years.
		1	Burglary, 1st degree.......	State prison 15 years.
		1	" 3d "	" 3 years.
		1	" 3d "	State reformatory.
		1	" 3d "	Penitentiary 1 year.
		1	" and larceny......	" 1 year 6 mos.
		1	Felonious assault..........	State prison 5 years.
		1	Rape......................	" 10 years.
		1	Riot.................	Jail 1 year.
Oyer & Ter..	February ..	2	Assault to rob.............	" 30 days and $50 fine.
		1	Burglary, 3d deg. and G. L.	State prison 4 years.
		1	" " "	Penitentiary 1 year.
		1	Forgery, 2d degree........	" 2 years.
Sessions....	March.....	3	Assault	Fine $10.
		1	"	Penitentiary 6 months.
		1	" and battery........	Fine $30.
		1	Attempt at burg. 3d degree	Penitentiary 2 years 6 mo.
		1	Burglary, 1st deg and G. L.	State prison 5 years.
		1	" 3d	" 2 years.
		1	Manslaughter, 4th degree..	Penitentiary 1 year.
		1	Perjury...................	State prison 3 years.
Oyer & Ter.	May.......	1	Assault to rob.............	" 1 year.
		2	Burglary, 3d degree.......	Penitentiary 1 year.
		1	Grand larceny	House of refuge.
		1	Rape	State prison 15 years.
Sessions....	June	1	Assault and battery	Fine $25.
		1	" to rob............	State prison 1 year.
		1	Burglary, 3d degree.......	" 2 years.
		1	" 3d " & larc.	" 1 year.
		1	" 3d " "	House of refuge.
		1	" 3d " "	Penitentiary 5 years.
		1	" and larceny......	State prison 1 year.
		2	" "	" 2 years.
		1	" "	" 3 years.
		1	Embezzlement	" 2 years.
Oyer & Ter..	September.	1	Burglary, 2d degree.......	House of refuge.
		2	" 3d "	Penitentiary 2 years.
		1	" 3d " &G. L.	" 1 year.
		1	False pretenses............	Jail 60 days.
		1	Grand larceny	Penitentiary 1 year.

COUNTY OF ST. LAWRENCE.

COURTS.	Date of conviction.	Number of convictions.	Offense.	Sentence.
Sessions....	1881. December..	1	Burglary and larceny......	Penitentiary 2 years.
		1	Grand larceny............	State prison 5 years.
		1	"	" 10 years.
		1	Manslaughter, 4th degree..	" 2 years.
		1	Rape.....................	" 5 years.
		3	Violating excise law.......	Fine $50.

Table A. — County of St. Lawrence — (Continued).

COURTS.	Date of conviction.	Number of convictions.	Offense.	Sentence.
Sessions....	1881. December .	1	Violating excise law	Fine $100.
Sessions....	1882. February ..	1	Burglary, 3d degree.......	Penitentiary 1 year.
		3	Violating excise law	Fine $25.
		4	“ “	“ 50.
		1	“ “	Suspended.
Oyer & Ter..	February..	1	Grand larceny............	State prison 3 years 3 mos.
		1	“	“ 4 years 3 mos.
		1	“	“ 4 years 8 mos.
Sessions....	March.....	1	Asssault................	Penitentiary 2 years.
		2	“ and battery.......	“ 3 years.
		2	“ “	Fine $25.
		1	“ “	“ 40.
		2	Keeping gambling house..	“ 50.
		2	Violating excise law	“ 25.
Oyer & Ter.	May.......	1	“ “	“ 50.
Sessions ...	June......	1	Assault and battery	Suspended.
		1	“ to ravish.........	State prison 1 year 6 mos.
		2	Violating excise law.......	Fine $25.
		4	“ “	“ 50.
Sessions....	August....	1	Grand larceny............	Penitentiary 1 year.
		1	Petit larceny.............	“ 3 months.
		1	“	“ 6 months.
		1	Rape....................	State prison 15 years.
		2	Violating game law.... ...	Fine $50.
		3	Violating excise law.......	“ 50.
		1	“ “	“ 100.

COUNTY OF SARATOGA.

COURTS.	Date of conviction.	Number of convictions.	Offense.	Sentence.
Sessions....	1881. December .	1	Burglary, 3d degree.......	State prison 1 year 6 mos.
		1	Grand larceny...........	“ 1 year 9 mos.
		1	Keeping disorderly house..	Jail 30 days and $150 fine.
		2	“ “ ..	Fine $25.
		1	“ gambling devices.	“ 25.
		1	Nuisance.................	“ 100.
		1	Petit larceny.............	Jail 40 days.
		3	Selling liquor without lic..	Fine $50.
		1	“ “ ..	“ 100.
Oyer & Ter..	1882. February ..	1	Assault and battery	“ 25.
		1	“ “	Jail 20 days and $150 fine.
		1	“ “ to kill.	House of refuge.
		1	“ “ “	State prison 2 years 6 mos.
		1	Bigamy..................	“ 1 year.
		1	Burglary, 3d degree.......	“ 1 year 6 mos.
		1	Keeping disorderly house..	Penitentiary 6 months.
		1	Petit larceny.............	Jail 10 days.
		2	“	Fine $100.
		1	“	“ 75.
		4	Selling liquor without lic..	“ 50.
Oyer & Ter..	June......	1	Assault..................	Jail 30 days.
Sessions....	July.......	1	Burglary	State prison 2 years.
		1	“ 3d degree.......	“ 2 years.
		1	“ 3d “	State reformatory.
		1	Grand larceny	“
		1	Keeping gambling house..	Fine $50.
		1	“ disorderly house..	“ 50.
		2	Libel....................	Jail 15 days.
		4	Petit larceny	“ 30 days.
		1	Violating excise law......	Fine $30.

Table A. — (Continued).

COUNTY OF SCHUYLER.

COURTS.	Date of conviction.	Number of convictions.	Offense.	Sentence.
	1882.			
Sessions....	February..	1	Selling liquor without lic..	Fine $100.
		1	Violating excise law.......	“ 25.
Sessions....	October....	1	Assault and battery.......	“ 25.
		1	Keeping gambling room...	“ 50.
		1	Selling liquor without lic..	“ 40.
			COUNTY OF SENECA.	
	1882.			
Oyer & Ter.	March.. ..	1	Assault and battery	Penitentiary 30 days.
Sessions....	May.......	2	Violating excise law.......	Fine $35.
		2	“ “	“ 30.
		2	“ “	“ 50.
		1	“ “	“ 60.
			COUNTY OF STEUBEN.	
	1881.			
Sessions....	December..	1	Forgery	Jail 6 months.
		1	Larceny from person......	“ 60 days.
		3	Petit larceny..............	“ 6 months.
	1882.			
Oyer & Ter.	January ...	1	Murder, 2d degree........	State prison life.
		6	Violating excise law.......	Fine $50.
Sessions....	June	1	Burglary, 3d degree........	State prison 3 years.
		1	Keeping gambling house..	Suspended.
		1	Petit larceny..............	Fine $1.
		1	Violating excise law.......	“ 50.
		1	“ “	“ 25.
			COUNTY OF SUFFOLK.	
	1882.			
Sessions....	March.....	1	Assault to rape............	State prison 2 years.
		1	Bigamy........	“ 1 year.
		1	“	Penitentiary 1 year.
		1	Grand larceny	State prison 1 year 6 mos.
		2	Willful injury to child.....	Fine $50.
Oyer & Ter.	April......	1	Disturbing oyster bed.....	“ 25.
		1	Violating excise law.......	“ 30.
Sessions....	September.	1	Selling liquor on Sunday..	“ 60.
		1	“ without lic ..	“ 75.
			COUNTY OF SULLIVAN.	
	1881.			
Sessions....	December..	1	Burglary and larceny	State prison 2 years 6 mos.
		1	Grand larceny	“ 1 year.
		1	Violating excise law.......	Fine $25.
			COUNTY OF TIOGA.	
	1881.			
Oyer & Ter.	December..	1	Assault to harm...........	State prison 1 year 6 mos.
		1	Forgery	“ 2 years.
	1882.			
Sessions....	February..	1	Grand larceny	“ 4 years.
		1	Illegal voting.............	Fine $25.
		1	Malicious mischief	“ 50.
		2	Selling liquor without lic..	“ 50.
		1	“ “ ..	“ 40.
		1	Violating excise law.......	“ 40

Table A. — County of Tioga — (Continued).

COURTS.	Date of conviction.	Number of convictions.	Offense.	Sentence.
Oyer & Ter.	1882. April......	1	Grand larceny	State prison 1 year.
Sessions....	September.	1	Assault to harm..........	" 2 years.
		1	Burglary...	House of refuge.
		1	Grand larceny	State prison 3 years 6 mos.
		1	Larceny, 2d offense........	" 1 year.
		1	Petit larceny.............	Fine $25.
		2	Violating excise law.......	" 25.
		1	" "	" 50.
			COUNTY OF TOMPKINS.	
Oyer & Ter.	1881. November..	2	Grand larceny............	State reformatory.
Sessions....	1882. February..	1	Burglary and larceny......	State prison 1 year.
		1	Grand larceny............	" 5 years.
		1	"	State reformatory.
		2	Keeping bawdy house.....	Penitentiary 1 year.
		1	" gambling house..	Fine $60.
		2	Violating excise law.......	" 150.
		4	" "	" 50.
		1	" "	" 25.
Oyer & Ter.	March.	1	" "	" 30.
		1	" "	" 60.
Sessions....	June	1	Assault and battery to kill.	State prison 2 years.
		1	Petit larceny.............	Penitentiary 4 months.
		1	"	" 10 months.
		1	Receiving stolen goods....	State prison 1 year.
		1	Violating excise law.......	Penitentiary 4 months.
		1	" "	Fine $25.
		1	" "	" 50.
		1	" "	" 60.
Sessions....	October ...	1	Assault to harm..........	State prison 4 years 9 mos.
		1	Violating excise law.......	Fine $60.
		1	" "	" 90.
			COUNTY OF ULSTER.	
Oyer & Ter.	1881. November..	3	Burglary..........	State reformatory.
		6	"	State prison 5 years.
Sessions....	December..	1	Assault and battery.......	Penitentiary 1 year.
Oyer & Ter.	1882. January....	1	Burglary.................	State prison 1 year.
		2	"	" 2 years.
		1	Grand larceny...........	" 2 years.
Sessions....	June	1	Burglary.................	State reformatory.
		1	Selling liquor on Sunday..	Fine $30.
		1	" without lic..	" 30.
			COUNTY OF WARREN.	
Sessions....	1881. November .	1	Assault and battery.......	Fine $10.
		2	" to maim	State prison 5 years.
		2	Robbery, 1st degree..	" 10 years.
		1	Selling liquor without lic..	Fine $25.
		2	" " ..	" 50.
		1	" " ..	" 75.
		1	Violating excise law.......	" 50.
Sessions....	1882. May.	1	Assault and battery	" 25.

Table A.— County of Warren — (Continued).

COURTS.	Date of conviction.	Number of convictions.	Offense.	Sentence.
Sessions....	1882. May	1	Burglary, 3d degree.......	State prison 3 years.
		1	Keeping gambling house..	Fine $75.
		5	Selling liquor without lic..	" 50.
Oyer & Ter.	September.	2	Burglary and larceny......	State reformatory.
		1	Obstructing railroad track.	House of refuge.

COUNTY OF WAYNE.

COURTS.	Date of conviction.	Number of convictions.	Offense.	Sentence.
Sessions....	1882. January ...	1	Burglary..................	State prison 3 years.
		1	Petit larceny, 2d offense...	" 3 years.
		6	Violating excise law.......	Fine $30.
Sessions....	April......	1	Assault and battery	Penitentiary 60 days.
		1	Violating excise law.......	Fine $20.
		1	" "	" 30.
		2	" "	" 75.
Oyer & Ter.	June	1	Murder, 1st degree........	Death.

COUNTY OF WESTCHESTER.

COURTS.	Date of conviction.	Number of convictions.	Offense.	Sentence.
Sessions....	1881. November .	1	Assault and battery.......	Fine $25.
		1	" to harm..........	Penitentiary 6 months.
		1	Burglary, 2d degree........	State prison 10 years.
		2	" 3d "	State reformatory.
		1	Convert'g mon'y to defraud	Fine $10.
		1	Grand larceny............	State prison 3 years.
		1	Indecent exposure	Fine $25.
		2	Selling liquor on Sunday..	" 50.
Oyer & Ter.	December..	1	Murder, 1st degree........	Death.
Sessions....	1882. February..	1	Assault to ravish..........	Fine $300.
		2	Grand larceny	State prison 3 years 6 mos.
		1	"	" 2 years.
		1	Libel.....................	Jail 60 days and $100 fine.
		1	"	" 15 days.
		1	Petit larceny..............	Penitentiary 6 mos.
		1	Selling liquor without lic..	Fine $10.
Sessions....	May	1	Arson, 4th degree..........	State prison 3 years 6 mos.
		1	Assault to harm...........	" 3 years 6 mos.
		1	" to ravish.........	House of refuge.
		1	Bigamy..	State prison 3 years.
		1	Burglary, 3d degree.......	" 1 year.
		1	Intoxication	Fine $10.
		1	Larceny from person......	State prison 2 years 6 mos.
		1	Nuisance..................	Suspended.
Oyer & Ter.	June	1	Murder, 1st degree........	Death.
Sessions....	September.	1	Arson, 2d degree..........	State prison 8 years.
		1	Assault to kill	" 5 years.
		1	"	" 4 years.
		1	Burglary, 3d degree.......	" 3 years.
		1	Grand larceny............	" 4 years.
		1	"	State reformatory.
		1	Manslaughter, 3d degree...	State prison 3 years 6 mos.
		1	Petit larceny..............	Penitentiary 6 months.
		1	Rape.....................	State prison 8 years.

COUNTY OF WYOMING.

COURTS.	Date of conviction.	Number of convictions.	Offense.	Sentence.
Oyer & Ter.	1881. December.	1	Grand larceny............	Penitentiary 1 year 3 mos.
		1	Petit larceny..............	" 3 mos.
		1	Selling liquor without lic..	Fine $10.

Table A.— County of Wyoming — (Continued).

COURTS.	Date of conviction.	Number of convictions.	Offense.	Sentence.
	1881.			
Oyer & Ter.	December..	1	Selling liquor without lic..	Fine $25.
	1882.			
Sessions....	January....	1	False pretenses...........	" 100.
		2	Selling liquor on Sunday..	" 50.
		1	" without lic..	" 30.
Oyer & Ter.	April......	1	Assault and battery.......	" 25.
Sessions....	June	1	Burglary, 2d degree.......	Penitentiary 2 years.
		1	" and larceny.....	State prison 15 years.
		1	Perjury..................	" 10 years.
		1	Selling liquor without lic..	Fine $125.
Oyer & Ter.	September.	1	Forgery	State prison 1 year.
		1	Petit larceny.............	Jail 30 days.
Sessions....	October ...	1	Assault...................	" 30 days.
		1	Riot......................	Fine $50.
		1	"	" 30.
			COUNTY OF YATES.	
	1882.			
Sessions....	June	1	Assault...................	Suspended.
		1	Violating excise law.......	"
		1	" "	Jail 30 days and $50 fine.

TABLE B.

Abstract of Convictions for Criminal Offenses by Courts of Record, in the several Counties in the State of New York, during the year 1882.

	Albany.	Allegany.	Broome.	Cayuga.	Chautauqua.	Chemung.	Clinton.	Columbia.	Cortland.	Delaware.	Dutchess.	Erie.	Essex.	Franklin.	Genesee.	Herkimer.	Jefferson.	Kings.	Madison.	Monroe.	New York.	Niagara.	Oneida.	Onondaga.
Assault with weapon	1	2												3										
Assault and battery	3			4	2				2		2	4	5	1	2		2	12	1	1	96	2		2
Assault to kill	1		1					1				3			1		1	3		1	7		2	1
Attempt at burglary	1																	36			63			
Assault		2																	1		6			
Assault to harm			1									2						2		1	52		2	
Assault to rape				2						1	2							2		1	5			
Assault on officer					2																			
Arson														1						3	1			1
Attempt at false pretenses																		1						
Attempt at petit larceny																		1			9			
Aiding prisoner to escape																		2						
Attempt at grand larceny																		5			19			
Attempt at forgery																		1						
Abortion																					1			
Attempt at larceny from person																					17			
Attempt to commit crime against nature																					1			
Attempt at robbery																					1			
Abduction																					1			
Attempt at arson																								1
Bigamy	1			2								3						2			7			
Burglary, 3d degree	12	1	1	4	8				3		5	10					4	17		6	231	1	1	6
Burglary, 2d degree	2			1													3			1	11			1
Burglary and larceny			1	1		3				2						1		31		2			2	1
Burglary, 1st degree				1									1								4			2
Careless use of fire-arms																								
Carrying concealed weapons																		1						
Carrying burglars' tools																		1						
Conspiracy																					2			
Conversion																								
Disturbing oyster beds																								

TABLE B — (*Continued*).

	Albany.	Allegany.	Broome.	Cayuga.	Chautauqua.	Chemung.	Clinton.	Columbia.	Cortland.	Delaware.	Dutchess.	Erie.	Essex.	Franklin.	Genesee.	Herkimer.	Jefferson.	Kings.	Madison.	Monroe.	New York.	Niagara.	Oneida.	Onondaga.
Embezzlement						1						2						2	1		10			
Extortion																							2	
Embezzlement and larceny																								1
Forgery	1	1	1	2		2		1		1		3		1		1		4		2	25			1
False pretenses	4		1			1						1						4		1	41			1
Felony																					3			
Felonious assault																								11
Grand larceny	16	4	3	3		7	1		1		1	2	1	1		6	2	24	2	13	301	3	1	
Grand larceny and receiving stolen goods									1									4						
Incest												2												
Indecent exposure																		5						
Illegal voting																								
Intoxication																								
Jail breaking	1																							
Keeping gaming house				1								10												
Keeping disorderly house							3											2						1
Larceny from person	1			1		1						3						6		4	202	4	1	
Libel																								
Manslaughter		1							3			1						4			25			1
Murder, 1st degree		1														1				1	7		1	
Malicious annoyance																		1						
Misdemeanor																		1			112			
Malicious trespass																				1				
Mayhem																								1
Maintaining nuisance																								
Obstructing highway	1																							
Obstructing R. R. track																								
Perjury	1																	1			1			
Petit larceny	14	2		1		1		1	1	1	3	18						32		5	333		1	2
Petit larceny, 2d offense	2			3					1			4					2			4				2
Petit larceny after felony	2											1												
Practicing as a physician unlicensed													1											
Rape	3												1					1			4		1	
Receiving stolen goods	3				2							2				1		1	2	5	21		1	1
Robbery	2		2		1	2						4						6		1	20			2
Resisting officer															2									
Riot																								
Seduction												1												

Stoning railroad train	......	......	......	......	......	......	......	......	......	......	......	......	......	......	1	......	......	......	......	......	......	1	......	......
Sodomy	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	1	......	......	......	......	......	......
Selling lottery tickets	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	1	......	......	......	......
Selling mortgaged property to defraud	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
Trespass on railroad	......	......	......	......	......	......	......	......	......	......	......	2	......	......	......	......	......	......	......	......	......	......	......	1
Violating excise law	1	1	7	44	18	1	9	......	1	7	6	......	4	5	4	......	3	......	6	1	......	2	......	3
Violating game law	......	......	......	......	......	......	1	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
Total	73	15	18	70	33	19	14	3	13	12	19	78	13	12	10	10	17	216	13	55	1639	13	15	43

Table B. — (Continued).

	Ontario.	Orange.	Orleans.	Oswego.	Otsego.	Queens.	Rensselaer.	St. Lawrence.	Saratoga.	Schuyler.	Seneca.	Steuben.	Suffolk.	Sullivan.	Tioga.	Tompkins.	Ulster.	Warren.	Wayne.	Westchester.	Wyoming.	Yates.	Total.
Assault with weapon																							6
Assault and battery			1	4	1	12	4	6	2	1	1						1	2	1	1	1		179
Assault to kill	1	1			1				2							1				2			30
Attempt at burglary							1																101
Assault							4	1	1				2								1	1	19
Assault to harm					1	1									2	1		2		2			69
Assault to rape					1	1	1	1					1							2			20
Assault on officer							1																3
Arson	1																			2			9
Attempt at false pretenses																							1
Attempt at petit larceny																							10
Aiding prisoner to escape																							2
Attempt at grand larceny																							24
Attempt at forgery																							1
Abortion																							1
Attempt at larceny from person																							17
Attempt to commit crime against nature																							1
Attempt at robbery							4																5
Abduction																							1
Attempt at arson	1																						2
Bigamy					1		1		1				2							1			21
Burglary, 3d degree	1		1			1	12	1	5			1			1		13	1	1	4			352
Burglary, 2d degree		2					2													1	1		25
Burglary and larceny	6				2	4	12	1						1		1		2			1		74
Burglary, 1st degree		2					1																10
Careless use of fire-arms																							1
Carrying concealed weapons	1					1																	3
Carrying burglars' tools																							1
Conspiracy																							2
Conversion																				1			1
Disturbing oyster beds						3							1										4
Embezzlement							1																17
Extortion																							2
Embezzlement and larceny																							1
Forgery			1				3					1			1						1		53
False pretenses	1						2														1		53
Felony																							3
Felonious assault						1	1																2
Grand larceny	2	4			5	4	3	6	2				1	1	3	4	1			6	1		435
Grand larceny after receiving stolen goods																							5
Incest			1																				3
Indecent exposure				1																1			7
Illegal voting															1								1
Intoxication																				1			1

Jail breaking																							1
Keeping gaming house					1	4		2	2	1		1				1		1					25
Keeping disorderly house									5							2							13
Larceny from person												1								1			225
Libel						1			2											2			5
Manslaughter			1				2	1												1			40
Murder												1							1	2			15
Malicious annoyance																							1
Misdemeanor					2																		115
Malicious trespass					1										1								3
Mayhem																							1
Maintaining nuisance	1					1			1											1			4
Obstructing highway																							1
Obstructing railroad track																		1					1
Perjury						1	1														1		6
Petit larceny								2	9			4			1	2				2	2		439
Petit larceny, 2d offense															1				1				20
Petit larceny after felony																							3
Practicing as a physician unlicensed																							1
Rape			2	1			2	2												1			18
Receiving stolen goods	1															1							41
Robbery	1				1	2												2					46
Resisting officer			1																				3
Riot							1														2		3
Seduction																							1
Stoning railroad train																							2
Sodomy																							1
Selling lottery tickets																							1
Selling mortgaged property to defraud																							1
Trespass on railroad																							2
Violating excise law	6		4	5	3	1		25	9	3	7	8	3	1	7	15	2	10	10	3	6	20	253
Violating game law								2															3
Total	23	9	12	11	20	38	59	50	41	5	8	17	10	3	18	28	17	21	14	37	13	3	2877

TABLE C.

Number of males and females convicted of criminal offenses by courts of record in the State of New York, during the year 1882, *with the classification of such offenses.*

OFFENSES AGAINST THE PERSON.

Crimes.	Males.	Females.
Abortion	....	1
Abduction	1	......
Assault	19	......
Assault and battery	179	......
Assault to rape	20	......
Assault on officer	3	......
Assault to kill	29	1
Assault with weapon	4	2
Attempt crime against nature	1	......
Assault to harm	69	......
Felonious assault	2	......
Larceny from person	216	9
Manslaughter	35	5
Murder	15	......
Rape	18	......
Seduction	1	......
Sodomy	1	......
	613	18

OFFENSES AGAINST PROPERTY, WITH VIOLENCE.

Crimes.	Males.	Females.
Attempt at larceny from the person	17	......
Attempted burglary	101	......
Attempt to rob	5	......
Burglary	386	1
Burglary and larceny	71	3
Robbery	45	1
	625	5

OFFENSES AGAINST PROPERTY, WITHOUT VIOLENCE.

Crimes.	Males.	Females.
Arson	9	......
Attempt to commit arson	2	......
Attempt to commit grand larceny	24	......
Attempt to commit petit larceny	10	......
Attempt to commit false pretenses	1	......
Disturbing oyster beds	4	......
Embezzlement	17	......
Grand larceny	394	41
Grand larceny and receiving stolen goods	5	......
Obtaining goods by false pretenses	56	2
Petit larceny	398	41
Petit larceny after felony	3	......
Petit larceny, second offense	20	......
Receiving stolen goods	40	1
Selling mortgaged property to defraud	1	......
	984	85

OFFENSES AGAINST THE CURRENCY.

Crimes.	Males.	Females.
Forgery	51	2

OTHER OFFENSES NOT INCLUDED IN THE FOREGOING.

Crimes.	Males.	Females.
Attempt at forgery	1	......
Aiding an escape	2	......
Bigamy	16	5
Breaking jail	1	......
Careless use of fire-arms	1	......
Carrying concealed weapons	3	......
Conspiracy	2	......
Conversion	1	......
Carrying burglars' tools	1	......
Stoning railroad train	2	......
Embezzlement and larceny	1	......
Extortion	2	......
Felony	3	......
llegal voting	1	......
ncest	2	1
ntoxication	1	......
ndecent exposure	7	......
Keeping disorderly house	1	12
Keeping gaming house	25	......
Libel	5	......
Malicious mischief	1	......
Malicious trespass	3	......
Mayhem	1	......
Misdemeanor	15	......
Nuisance	4	......
Obstructing highway	1	......
Obstructing railroad track	1	......
Perjury	6	......
Practicing medicine unlicensed	1	......
Resisting officer	3	......
Riot	3	......
Selling lottery tickets	1	......
Trespass	2	......
Violating excise law	247	6
Violating game law	3	......
	470	24
Total	2,743	134

TABLE D.

Number of convictions by courts of record in the State of New York for the fifty-one years commencing with 1830, *and ending with* 1881, *with classfication of crimes.*

CRIME.	1830.	1831.	1832.	1833.	1834.	1835.	1836.	1837.	1838.	1839.	1840.	1841.	1842.	1843.	1844.	1845.	1846.
OFFENSES AGAINST THE PERSON.																	
Abandonment	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Abortion	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Administering poison	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Abandoning infant	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	1
Abduction of females under 14 years	....	....	....	....	....	....	1	1	....	1	5	....	....	....	1	1	....
Abduction	....	....	....	....	....	....	....	....	1	....	....	1	....	....	....	....	....
Accessory to assault, etc., with intent to kill	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....
Accessory to murder	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Accessory to rape	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	1
Affray	....	....	....	....	....	....	....	....	....	....	....	....	9	....	8	5	....
Assault	....	....	....	....	....	6	4	5	14	5	7	3	16	11	17	15	11
Assault and battery	170	192	197	309	146	230	255	221	209	205	324	332	341	281	283	330	281
Assault and battery and affray	....	....	....	....	....	....	....	....	2	2	....	....	....	....	....	....	....
Assault and battery and false imprisonment	....	....	....	....	....	....	....	....	1	....	....	....	1	5	7	....	....
Assault, intent to ravish	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Assault and cutting	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Assault and trespass	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Assault on public officer	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Assault, etc., with intent to maim	....	....	....	....	....	....	....	....	1	....	....	....	....	1	1	1	4
Assault, etc., with intent to kill	18	12	2	9	13	12	15	19	17	15	18	13	11	17	13	16	18
Assault, etc., with intent to commit larceny	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
Assault, etc., with intent to commit rape	5	8	11	3	8	4	10	9	7	11	17	7	5	5	11	19	10
Assault with deadly weapon	....	....	....	....	....	....	....	....	....	....	....	2	....	....	....	....	....
Assault, etc., with intent to commit manslaughter	....	....	....	....	....	....	....	....	....	....	....	2	....	....	....	....	....
Assault, etc., with intent to rob	....	....	....	....	....	....	....	....	....	1	1	....	....	1	1	....	....
Assault and rescue	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	2	....
Assault, with intent to do bodily harm	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Assembling in disguise armed, riot, ass'lt & battery	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....
Assisting to commit a rape	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Attempt to murder	....	....	....	....	....	....	2	....	....	....	....	....	....	....	....	....	....
Attempt to poison	....	....	....	....	....	....	....	1	1	....	....	....	....	....	....	....	....
Attempt to procure an abortion	....	....	....	....	....	....	....	....	....	....	....	1	3	....	....	....	....
Burglary, rape, and robbery	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
Cruelty to children	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Decoying children under 12 years of age	....	....	....	....	....	....	....	....	....	1	....	1	....	....	....	....	....
Incest and rape	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....
Inciting another to kill	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1
Inveigling	....	....	....	....	....	....	....	5	....	....	....	....	....	....	....	1	2
Kidnapping	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	23	6
Larceny from person	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	7	8

						2			1	1	1						
Manslaughter	6	6	5	7	6	8	6	6	8	9	10	11	11	6	12		
Murder	3	2		2	3	3	4	3	4	5	7	5	5	3	3		3
Poisoning and assault										1						4	7
Poisoning with intent to kill							1		1			2	1		2		
Procuring abortion												1	1		3	6	
Rape	6	3	4	3	7	5	3	3	7	5	3	2	5	5	4	39	31
Riot and affray												6		1			
Riot and assault											20		3	3	14		
Riot, assault and battery	28	18	70	29	30	17	45	33	12	24	50	63	71	66	13		
Riot, assault and battery, and aiding an escape																	
Riot, assault and battery, and rescue												5					
Seduction																	
Sodomy																	
	237	242	289	362	214	287	316	393	296	287	463	458	484	408	394	471	384
OFFENSES AGAINST PROPERTY WITH VIOLENCE.																	
Attempt to commit larceny																	
Accessory to burglary and larceny											1					2	
Attempt to commit burglary								2	1	1		1	2	9	6	6	3
Attempt at felony																	
Attempt to rob								1			1	1					1
Burglary	95	81	74	66	90	88	79	108	90	74	21	52	28	31	21	25	16
Burglary and arson										1							
Burglary and larceny	3							7	16	34	85	63	130	194	139	136	112
Felony																	
Forcible entry														4			
Petit larceny from the person																	
Robbery	4	12	5	9	9	4	7	6	5	5	12	4	15	6	6	8	6
Robbery after a felony																	
	102	93	79	75	99	92	86	124	112	115	120	121	175	244	172	177	133
OFFENSES AGAINST PROPERTY WITHOUT VIOLENCE.																	
Accessory to arson													1				
Accessory to grand larceny															1	2	1
Arson	4	2	8	9	6	6	3	6	4	11	4	9	11	14	7	12	9
Attempt to commit arson								1				1	1	1			1
Attempt to commit grand larceny									1			1			2	1	3
Attempt to commit petit larceny									3	1	1	2	1		2	2	4
Attempt to obtain property by false pretenses									1			1					1
Buying pretended title to land												3	7			2	
Embezzlement					3	2	2	2	3		2	4	4	3	2	1	
Fraudulent concealment of property										1			1	3		1	
Grand larceny	195	199	194	180	149	220	220	211	201	181	190	225	207	219	190	200	193
Grand larceny in a dwelling																	
Grand larceny, and receiving stolen goods												1					
Larceny, second offense										10							

Table D.— (Continued).

CRIME.	1830.	1831.	1832.	1833.	1834.	1835.	1836.	1837.	1838.	1839.	1840.	1841.	1842.	1843.	1844.	1845.	1846.
Obtaining property by false pretenses	7	12	15	30	11	20	7	19	9	15	17	23	14	32	27	35	22
Obtaining signature by false pretenses										1		1	2	1	1	1	2
Petit larceny	225	127	121	162	19	16	110	159	185	185	146	131	160	146	147	129	171
Petit larceny, after conviction of felony											6		9	11	16	1	7
Petit larceny, second offense	55	112	96	61	53	54	35	71	15	58	59	41	67	57	76	52	43
Petit larceny and receiving stolen property, etc										2							
Receiving stolen property	16	12	6	20	14	8	2	8	14	14	11	15	12	16	18	20	14
Removing property with intent to defraud cred'trs											1						
Selling pretended title to land												2	7	1			
False pretenses																	
	502	464	440	462	355	426	379	477	472	479	437	460	504	504	489	467	471
OFFENSES AGAINST THE CURRENCY.																	
Accessory to forgery											1			1			
Counterfeiting	2	3	2				3	6	7	4							
Forgery	56	45	46	40	39	23	21	25	27	35	48	47	63	77	60	54	38
Having counterfeit money in possession, etc										1							
Passing counterfeit money	16	12	12	21	14	11	8	21	8	11		2					
	74	63	60	61	53	34	32	52	42	51	49	49	63	78	60	54	38
OTHER OFFENSES NOT INCLUDED IN THE FOREGOING.																	
Accessory to felony																	
Advertising lottery tickets for sale											4						
Aiding an escape									4	1	3	5	2	2	3	3	
Aiding an escape and riot													1	4			
Aiding and assisting in horse-racing													1	2	3	1	
Aiding & ass'tng in horse-racing & k'png ga'mg h'se														1			
Allowing liquor to prisoners									1								
Appearing in disguise																1	
Assembling in disguise and armed																29	
Assembling in disguise armed, and riot																2	
Assembling in disguise armed, and conspiracy																2	
Attempt to break jail													1			3	2
Attempt to bribe an elector										1		1					
Attempt to commit crime against nature									1								
Attempt to extort															1		
Attempt to rescue															1		
Winning or losing at play $25 in 24 hours										1							
Bigamy	5	5	4	3	2	8	4	4	5	12	10	6	9	10	8	11	8
Blasphemy											1						

Breaking jail	19	7	4	7	5	8		2	4	5	6	5		3	6	6	2
Breach of the peace																	
Bribery at election														1			
Buggery																	
Carrying liquor in jail									1			2			2		2
Carrying slung-shot																	
Cheating						1	3	1	1	2							
Compounding petit larceny														1			
Compounding misdemeanor															1		
Conspiracy	4	13	9	1	3	7	6				4	1	11	8	5	3	3
Conspiracy and false imprisonment										2							
Conspiracy and libel											2						
Conspiracy and riot											5						
Contempt of court								1	2								
Crime against nature	1	1	2	1	1	1				3	2	2	1	1		1	
Criminal contempts														1	2		1
Cruelty to animals									2	3		1	1	5	2	1	
Disorderly persons								3									
Embezzlement																	
Escapes																	1
Exposing the person																	
Extortion						1					1	1	1		1		1
Ferrying without license											2	9	4	1			
Gaming								1					1				1
Giving liquor to prisoners									1	1							
Giving or receiving a challenge to fight a duel													1				
Horse-racing	23								2			3	6	1	4	6	7
Illegally offering to vote															4		1
Illegal voting											5	3	3	5	7	4	5
Illegal registering name as voter												1					
Incest			1	4			5	2	1	1	2			1	1	1	1
Intoxication																	
Indecent exposure										6	2	1		1	1	2	5
Insuring lottery tickets										1							
Insuring numbers in lottery										2	1	4	2				2
Keeping disorderly or bawdy house	32	14	18	27	11	25	16	13	20	3	20	114	54	42	53	56	55
Keeping dis'dly house, & selling liquor with'ut l'nse											8			2		3	5
Keeping bawdy-house, & selling liquor without l'nse																29	3
Keeping gaming-house											10	15	11	7	17	9	28
Keeping gaming-h'se, & selling liquor without l'nse													1		1		
Keeping lottery-office																	1
Letting bawdy house										1		3	3				
Libel	5			4		2	3	2		5	4	1	7	16	9	4	5
Malicious mischief																	
Malpractice as physician																	1
Marrying married person																1	
Mayhem																	
Misdemeanor	12	23	30	66	69	71	66	31	15	9		4				6	
Nuisance	6	3	3	6	3	5	2	2	3		9	1	12	3	8	15	18
Official malpractice											1		3	6	1	2	2

Table D.— (Continued).

CRIME.	1830.	1831.	1832.	1833.	1834.	1835.	1836.	1837.	1838.	1839.	1840.	1841.	1842.	1843.	1844.	1845.	1846.
Obstructing railroad track																	
Opening sealed letter															1	1	
Perjury	13	6	7	9	9	8	4	3	6	3	12	3	9	10	9	9	3
Piloting without license													1	2			
Prize fighting																	
Procuring illegal voters											1						
Publishing obscene papers, etc													8	4			
Receiving dead bodies, etc																1	
Refusing to assist an officer									2			1	1	1		1	
Rescue					2				1	1	1	2	1				
Resisting public officer																	
Riot	10	11	5	18	39	63	36	30	21	23	72	82	66	42	22	24	44
Riot and attempt at rescue											1						
Riot and trespass														9	2		
Selling goods at auction contrary to law																3	
Selling liquor to Indians									2	1						5	10
Selling liquor without license						21		43	59	59	66	118	128	130	117	237	302
Selling liquor to minors																	
Selling liquor without license and to Indians																6	3
Selling lottery tickets										1	7	10	5	4	5	1	3
Selling unwholesome provisions												1					
Selling liquor on Sunday																	
Solicitation to commit felony																	
Setting up lottery											2						
Selling obscene prints																	
Stakeholding										1					1		
Sodomy																	
Subornation of perjury							1									1	
Tavern sign, erecting without license																	
Trespass	5	11	15	6	4	16	4	7	11	8	8	14	23	7	11	18	13
Trespass on Indian lands													1			11	
Unlawful assembly													2				
Usury									1	1	2	3	2	1	2	1	1
Violating quarantine law										1							
Violating the grave															1		1
Violating gambling law																	
Violating emigrant law																	
Writing threatening letter																	
Not given																	
Violating excise laws																	
Voting illegally																	
Violating game law																	
	144	94	98	153	148	237	150	145	164	186	274	427	376	336	312	520	440
Total	1,059	956	956	1,113	869	1,076	963	1,091	1.086	1,118	1,343	1,515	1.062	1,570	1,427	1,689	1,571

Table D.— (Continued).

CRIME.	1847.	1848.	1849.	1850.	1851.	1852.	1853.	1854.	1855.	1856.	1857.	1858.	1859.	1860.	1861.	1862.	1863.
OFFENSES AGAINST THE PERSON.																	
Abandonment																	
Abortion																	
Administering poison														3			
Abandoning infant	1	1	1					1									1
Abduction of females under 14 years																	2
Abduction		9	1	3								1	2	2			
Accessory to assault, etc., with intent to kill												7					
Accessory to murder																	
Accessory to rape																	
Affray	2																
Assault	8	9	10	5	16	15	5	3	19	22	38	36	14	5		14	12
Assault and battery	252	302	265	282	256	267	299	256	260	273	211	259	279	377	325	226	240
Assault and battery and affray					22	8											
Assault and battery and false imprisonment		4															
Assault, intent to ravish														5			
Assault and cutting			1														
Assault and trespass			1							1							
Assault on public officer														10	7	8	11
Assault, etc., with intent to maim	3													1			
Assault, etc., with intent to kill	15	23	21	24	31	33	29	24	17	24	22	24	26	56	80	34	21
Assault, etc., with intent to commit larceny																	
Assault, etc., with intent to commit rape	12	15	18	15	15	15	19	16	14	9	22	13	14	12	21	8	13
Assault with deadly weapon						10		22	19	22		1		48			19
Assault, etc., with intent to commit manslaughter.	1																1
Assault, etc., with intent to rob	2	2	2	7	3		5	5	6	9	8	17	23	18	10	6	
Assault and rescue	7									4							9
Assault with intent to do bodily harm														2			13
Assembling in disguise, armed, riot, as'lt & battery																	
Assisting to commit a rape				1						1							
Attempt to murder													2				
Attempt to poison													2				
Attempt to procure abortion		1		1						1			1				
Burglary, rape and robbery																	
Cruelty to children																	
Decoying children under 12 years of age		1															
Incest and rape						2							1				
Inciting another to kill	1																
Inveigling																	
Kidnapping																	1
Larceny from person															38	22	
Maiming		1		2						8				1			
Manslaughter	12	15	21	22	20	12	23	33	20	20	30	37	29	32	43	35	31
Murder	4	4	3	3	16	12	13	9	8		6	11	7	7	15	11	12

Table D.— (Continued).

CRIME.	1847.	1848.	1849.	1850.	1851.	1852.	1853.	1854.	1855.	1856.	1857.	1858.	1859.	1860.	1861.	1862.	1863.
Poisoning and assault																	
Poisoning with intent to kill			3	2													
Procuring abortion	1		1														1
Rape	6	7	10	4	8		11	17	8	15	13	7	13	17	20	11	12
Riot and affray						14	77										
Riot and assault												1					13
Riot, assault and battery	8	50	35	20	18	21	3	33	23	12	24	20	9	3			15
Riot, assault and battery, and aiding an escape																	
Riot, assault and battery, and rescue																	
Seduction		1			4	2		1	1	2	1		3		3	1	1
Sodomy																	
	395	443	393	391	409	411	482	420	395	425	375	434	425	599	562	377	428
OFFENSES AGAINST PROPERTY WITH VIOLENCE.																	
Attempt to commit larceny														29	26	39	58
Accessory to burglary and larceny																	
Attempt to commit burglary	5	3	3	9	4	3		4	5	19	33	38	52	19	23	10	16
Attempt at felony															4		
Attempt to rob	1								2								
Burglary	18	24	65	114	90	130	152	137	226	178	220	205	184	247	230	124	108
Burglary and arson																	
Burglary and larceny	90	75	71	57	42	78	11	36	19	39	59	65	83	57	23	23	33
Felony														4	10	1	1
Forcible entry	1																1
Petit larceny from the person																	
Robbery	17	18	11	19	12	17	22	12	16	12	38	21	22	25	24	15	27
Robbery after a felony																	
	132	120	150	199	148	228	185	189	268	248	340	329	341	381	340	215	241
OFFENSES AGAINST PROPERTY WITHOUT VIOLENCE.																	
Accessory to arson	2																
Accessory to grand larceny				1													
Arson	7	8	12	12	13	12	8	11	12	8	14	12	10	18	16	19	11
Attempt to commit arson		1		1				1			10	2	10				3
Attempt to commit grand larceny	3	4	1		7	1		13	18	22	34	60					
Attempt to commit petit larceny		2	1	1			6						93				
Attempt to obtain property by false pretenses																	
Buying pretended title to land																	
Embezzlement	2	6	2		1	2	4	7	3	2	4	2					
Fraudulent concealment of property		2															
Grand larceny	155	218	250	240	249	286	336	273	249	264	264	263	295	292	284	213	270
Grand larceny in a dwelling																	
Grand larceny and receiving stolen goods																	

Larceny, second offense										10	42						1
Obtaining property by false pretenses	21	25	15	23	15	14	21	24	19	11	20	12	7	20	29	24	15
Obtaining signature by false pretenses	1	1															
Petit larceny	149	164	187	192	134	123	131	197	225	206	204	205		150	218	162	190
Petit larceny after conviction of felony	7	13	9	2				3				1	5	10			70
Petit larceny, second offense	34	51	43	36	42	33	51	28	20	33				63	48	20	27
Petit larceny and receiving stolen property, etc																	
Receiving stolen property	15	17	25	13	14	9	16	23	28	17	15	20	19	13	24	11	8
Removing property with intent to defraud cred'tr																	
Selling pretended title to land																	
False pretenses																	
	396	512	545	521	475	480	573	580	574	573	607	577	439	566	619	449	595
OFFENSES AGAINST THE CURRENCY.																	
Accessory to forgery																	1
Counterfeiting						8		6	4								
Forgery	24	33	37	25	44	37	48	59	33	47	59	90	89	100	147	70	58
Having counterfeit money in possession, etc								6									3
Passing counterfeit money			6	11	5	5	4	4		2	4			21	3	5	6
	24	33	43	36	49	50	52	75	37	49	63	90	89	121	150	75	68
OTHER OFFENSES NOT INCLUDED IN FOREGOING.																	
Accessory to felony		1			4	9										3	3
Advertising lottery tickets for sale		4						3						1			
Aiding an escape	2	1	1				17	2	1			2	1	2		2	2
Aiding an escape, and riot																	1
Aiding and assisting in horse-racing																	
Aiding and assisting in horse-racing & k'p g'm h's																	
Allowing liquor to prisoners																	
Appearing in disguise						1											
Assembling in disguise and armed																	
Assembling in disguise armed, and riot																	
Assembling in disguise armed and conspiracy																	
Attempt to break jail																	
Attempt to bribe an elector																	
Attempt to commit crime against nature	1	1															
Attempt to extort																	
Attempt to rescue																	
Winning or losing at play $25 in 24 hours		1															
Bigamy	10	17	11	13	12	21	8	12	5	11	17	10	11	8	9	9	22
Blasphemy										3							
Breaking jail	6	1	5	4	8	9	3	9	3	6		4	5	2		1	3
Breach of the peace															5	1	2
Bribery at election			1										4				
Buggery													1	4			
Carrying liquor in jail		1	2	2	1								1				
Carrying slung-shot				3	3	3	8	5	3	3	1			3		1	1

Table D.— (Continued).

CRIME.	1847.	1848.	1849.	1850.	1851.	1852.	1853.	1854.	1855.	1856.	1857.	1858.	1859.	1860.	1861.	1862.	1863.
Compounding misdemeanor									4	2							
Conspiracy	6	2		9													
Conspiracy and false imprisonment																	
Conspiracy and libel																	
Conspiracy and riot																	
Contempt of court										1				2			
Crime against nature	2		2			2											
Criminal contempts																	
Cruelty to animals		6			1										3	1	
Disorderly persons					3				2	1	23	3	1				
Embezzlement														4	4	2	7
Escapes				2													
Exposing the person				3	2	2	7	5	8	2		1			5	4	1
Extortion		1															
Ferrying without license																	
Gaming				1	1			10	3	3	1		2		3		4
Giving liquor to prisoners																	
Giving or receiving a challenge to fight a duel																	
Horse-racing	1	1					2										
Illegally offering to vote	3		1														
Illegal voting	2	6	5	4	2	3	3	6	20	2	3	12	6	5	5	3	
Illegally registering name as voter											1						
Incest	2								2	2	1	2	2	3			2
Intoxication												21	5	22	22	8	9
Indecent exposure		5	1										2	10			
Insuring lottery tickets																	
Insuring numbers in lottery	2		1														
Keeping disorderly or bawdy-house	38	52	57	41	15	38	2	56	33	29	31	26	29	26	36	39	14
Keeping disorderly h'se and selling liq'r with'ut lic	1	3	2				10										1
Keeping bawdy-h'se and selling liquor without lic.																	
Keeping gaming-house	12	17	20	16	14	6	14	26	17	14	13	12	12	8	4	8	5
Keeping gaming-house, and selling l'qr without lic	3																
Keeping bawdy-house								1									
Letting bawdy-house																	1
Libel		2		3	4	1	1	14	3	1				3		1	
Malicious mischief			2	4	9	2	14		3	5	16	2	19	12	18	3	5
Malpractice as physician	2																
Marrying married person																	1
Mayhem												2	5				
Misdemeanor							91	23	2	32	19			31	9	41	15
Nuisance	10	15		10	12	1	8	15	8	12	3	2	3	7	2	8	10
Official malpractice	1	1						1	3								

Obstructing railroad track													3	2			
Opening sealed letter			1														
Perjury	3	2	6	9	7	3	4	1	3	6	2	2	6	9		4	4
Piloting without license																	
Prize fighting														5			
Procuring illegal voters																	
Publishing obscene papers, etc	1	2	1	1													
Receiving dead bodies, etc																	
Refusing to assist an officer																	
Rescue	2																
Resisting public officer		2	4	6				10	2	5				3			
Riot	44	91	74	69	93	69		91	54	38			22	16	23	29	4
Riot and attempt at rescue																	34
Riot and trespass																	
Selling goods at auction contrary to law										2							
Selling liquor to Indians	3	4	8									2		2			
Selling liquor without license	229	159	272	178	200	256	341	508	358	26	12	94	361	338	439	323	216
Selling liquor to minors														1			
Selling liquor without license and to Indians	3																1
Selling lottery tickets	5	10	7	4	4	6		9	9	1		1	3	3	5	11	2
Selling unwholesome provisions													1				
Selling liquor on Sunday														2			
Solicitation to commit felony																	
Setting up lottery		1															
Selling obscene prints																	
Stakeholding																	
Sodomy																	
Subornation of perjury								1									
Tavern sign, erecting without license		1	1														
Trespass	12	13	10	21	5	4	3	19	4			8			11	1	6
Trespass on Indian lands		1															
Unlawful assembly																	
Usury									1			1			1		
Violating quarantine law																	
Violating the grave	2			1													
Violating gambling law																	
Violating emigrant law		1															
Writing threatening letter					1												
Not given					1		17	26	5	8	25						
Violating excise laws																	
Voting illegally																	
Violating game laws																	
	40	425	404	410	401	434	553	853	556	212	168	206	505	545	604	500	372
Total	1,294	1,527	1,531	1,552	1,482	1,602	1,844	2,117	1,830	1,507	1,554	1,712	2,091	1,601	1,671	1,616	1,644

Table D.—(Continued).

CRIME.	1864.	1865.	1866.	1867.	1868.	1869.	1870.	1871.	1872.	1873.	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.
OFFENSES AGAINST THE PERSON.																			
Abandonment														1	1			2	
Abortion					1				3	2	1	1	2	2	2	3	6		1
Administering poison			1				2			1		1					3		
Abandoning infant	2	3		2				21		1			1						
Abduction of females under 14 years									2										
Abduction								1				1		4	2	1	3	3	1
Accessory to assault, etc., intent to kill													1						
Accessory to murder					2														
Accessory to rape																			
Affray				1						3			2	111	2				
Assault	17	11	11	12	11				17	37	20	26	36		44	21		8	19
Assault and battery	208	243	317	313	322	336	264	251	285	334	296	324	303	315	345	280	207	160	179
Assault and battery and affray																		2	
Assault and battery and false impr'ent																			
Assault, intent to ravish			5					1							6				20
Assault and cutting																			
Assault and trespass																			
Assault on public officer	9		9		9	5	4	2	22	7	10	7	18	11	3	10		3	3
Assault, etc., with intent to maim		10	1	20	23								14		1	2			
Assault, etc., with intent to kill	12	16	16	16	33	23	31	32	26	45	55	32	30	25	22	13	33	31	30
Assault, etc., intent to commit larc'y													9	3	13				
Assault, etc., intent to commit rape	5	14	14	12	18	19	20	17	22	26	16	20	24	16	21	15	9	6	
Assault with deadly weapon	12	24	15	16	15	2	5	6	38	30	14	44	10	14	87	78	30	36	6
Assault, etc., intent to com't mansl'gtr.																			
Assault, etc., with intent to rob	6	19	13		10	11	8	17	1	11	4	72	3		4	5	2	3	
Assault and rescue																			
Assault with intent to do bodily harm	13		22			34	47	48	32	51	34	42	84	27	22	60	63	63	69
As'mblg in d'sgse armed, riot, a'slt&b't.																		19	
Assisting to commit a rape											2	2	2					4	
Attempt to commit crime ag'st nature																			1
Attempt to murder		2										1							
Attempt to poison					1														
Attempt to procure abortion			1										1						
Burglary, rape and robbery													1		1				
Cruelty to children														2					
Decoying children under 12 years of age																			
Felonious assault																			2
Incest and rape								2			3						3	2	
Inciting another to kill																			
Inveigling																			
Kidnapping	1										6				2				
Larceny from person	24		45		29	34	64	70	62	83	101	163	194	45	188	163		26	225

Maiming					1							7	1	1					
Manslaughter	40	36	35	23	29	29	33	51	38	55	39	46	19	20	37	24	30	25	40
Murder	12	18	15	15	13	17	15	18	9	13	24	24	19	16	17	18	15	13	15
Poisoning and assault																			
Poisoning with intent to kill																			
Procuring abortion																			
Rape	6	11	12	16	16	18	15	16	16	13	17	20	20	24	12	11	16	6	18
Riot and affray	30		8																
Riot and assault																		15	
Riot, assault and battery	20	10	12	6	16	33		16	17	2	4	3	4	8					
Riot, asl't & bt'ry, & aiding an escape																			
Riot, assault and battery, and rescue																			
Seduction	3		3	1	4	2		4	1	5	4	1	2	2	3	4	2	2	1
Sodomy					2	1	2			3	1	2	1			1	2	3	1
	420	417	555	453	555	564	510	554	591	722	651	840	801	647	835	655	422	643	631
OF'NS AG'ST PROP'Y WITH VIO'NCE.																			
Attempt at larceny from person																			17
Attempt to commit larceny	61		2			1						168	22		18	23			
Accessory to burglary and larceny					1										3				
Attempt to commit burglary	3	39	83	62	57	51	86	56	95	125	202	159	38	63	70	50	47	72	101
Attempt at felony	5																		
Attempt to rob			2								16	15	9	7	2	17	13		5
Burglary	48	124	264	228	245	277	229	278	183	282	377	459	647	689	652	458	504	391	387
Burglary and arson																			
Burglary and larceny	29	51	64	61	69	100	60	95	76	40	62	52	112	190	194	150		101	74
Felony	1		5						2	23	2	3	2	8	13	6	3	6	
Forcible entry	2							5											
Petit larceny from the person														178			194	176	
Robbery	20	45	47	40	45	36	67	45	51	55	57	61	2	66	61	27	27	44	46
Robbery after felony														4				1	
	169	289	467	391	417	465	442	479	407	525	716	917	832	1,205	1,013	731	788	617	630
OF'NS AG'ST PROP'Y WTH'UT VI'LNCE.																			
Accessory to arson																			
Accessory to grand larceny															1				
Arson	13	17	17	18	27	14	21	17	11	13	18	24	30	26	25	21	19	13	9
Attempt to commit arson			5		3	4			2		4	2	2	4	1	1		1	2
Attempt to commit grand larceny		176	164	188	115	82	83	84	157	197	406			18			30	38	24
Attempt to commit petit larceny			11		5				2	39				15					10
Attempt to obtain prop'y by false p'tns.										2							2		1
Buying pretended title to land																			
Disturbing oyster beds																			4
Embezzlement	2	5	7	9	7	14	6	7	5	7	2	12	12	13	18	16	7	5	17
Fraudulent concealment of property																			
Grand larceny	247	477	574	531	449	497	450	455	347	451	488	533	624	606	614	419	412	393	435
Grand larceny in a dwelling														3					

Table D. — (Continued.)

CRIME.	1864.	1865.	1866.	1867.	1868.	1869.	1870.	1871.	1872.	1873.	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.
Grand larceny & rece'vng stolen goods.			1															2	5
Larceny, second offense.			2	4	7				16	20				40					
Obtaining property by false pretenses.	7	13	26	29	38	21	30	23	23	33	23	23	70	20	76		42	9	58
Obtaining signature by false pretenses.																			
Petit larceny	137	181	256	245	244	251	223	234	223	372	399	346	366	447	382	298	386	321	439
Petit larceny after conviction of fel'ny.		1	3		4							10	4	3	5			8	3
Petit larceny, second offense	17	26	26	11	24	20	15	28			19	30	19	23	13	15		19	20
Petit l'eny & receiving stolen pt'y, etc.													1					2	
Receiving stolen property	11	11	27	28	13	11	13	16	6	26	38	49	58	48	88	55	70	67	41
R'mvng pr'pty with intent to d'fd cr'd.																			
Selling mortgaged property																			1
Selling pretended title to land																			
False pretenses											25	27	1	38		40		53	
	436	907	1,119	1,063	936	914	841	864	792	1,160	1,422	1,056	1,187	1,304	1,223	876	968	1,025	1,069
Offenses Against the Currency.																			
Accessory to forgery																			
Counterfeiting		1	1			7		3	1						1				
Forgery	51	46	50	49	41	41	31	51	38	50	59	87	86	103	102	74	56	57	53
Having counterfeit money in pos., etc.																			
Passing counterfeit money	9	5	2				1												
	60	52	53	49	41	48	32	54	39	50	59	87	86	103	103	74	56	57	53
Other Of'ns not Included in F'gng.																			
Attempt at forgery																			1
Accessory to felony		16	1	5	5														
Advertising lottery tickets for sale																			
Aiding an escape	4						2	2	1	3	4		2	1	2	1		1	2
Aiding an escape, and riot																			
Aiding and assisting in horse-racing																			
A'dng & as'tg in h'se-r'cng, k'p g'm h's.																			
Allowing liquor to prisoners																			
Appearing in disguise																			
Assembling in disguise and armed.																			
Assembling in disguise armed, & riot.																			
As'mb in dis'gse armed, & conspiracy.																			
Attempt to break jail	2				2	1	3	1	3						1	3			
Attempt to bribe an elector																			
At'mpt to commit crime ag'st nature.													1						
Attempt to extort			2																

Attempt to rescue																			
Winning or l'sng at play $25 in 24 h'rs			1																
Bigamy	11	14	19	17	21	12	20	17	8	15	21	20	24	21	31	27	22	21	21
Blasphemy	2																		
Breaking jail	4	2	5	2	5	5	6	5	8		6	6	3	5	7		6	2	1
Breach of the peace	1		1		5	1								1					
Bribery at election													1						
Buggery						1													
Careless use of fire-arms																			1
Carrying concealed weapons																			3
Carrying liquor in jail																			
Carrying slung-shot		5	4	2	3	5	1	10	7	10	20	15	5	6			3	6	
Cheating																			
Compounding petit larceny																			
Compounding misdemeanor																			
Conspiracy			4		8	7							4	2	6	3			2
Conspiracy and false imprisonment																			
Conspiracy and libel																			
Conspiracy and'riot																			
Contempt of court												1		1					
Conversion																			1
Crime against nature												2	2				1	1	
Criminal contempts					7	5	9	4		1			1						
Cruelty to animals									13	10	2	3	14	3	1		1		
Common scold																	1		
Carrying burglar's tools																	1		1
Impersonating an officer																	1		
Common gambler																	3		
Stoning railroad train																	1		2
Violating plank-road law																	1		
Poisoning well																	1		
Embezzlement and larceny	7				15				2	2	1								1
Escapes																			
Exposing the person				7	7		2	8					8		6	8			
Extortion										2					1	1			2
Felony																			3
Ferrying without license																		1	
Gaming	4	4	1	13		2		1		19	5	1	14	3					
Giving liquor to prisoners																			
Giving or r'cvng a ch'lnge to fight a d'l.																			
Horse-racing																			
Illegally offering to vote																			
Illegal voting					5	7	4		3				6						1
Illegal registering name as voter													3	1					
Incest	3		2			1									4	1			3
Intoxication	6	3	9		22						1			3	2				1
Indcent exposure	1		5		6	4			3	7	5	5		6			7	8	7
Insuring lottery tickets					1														
Insuring numbers in lottery																			
Keeping disorderly or bawdy-house	5	42	16	33	41	45	18	39	35	26	10	12	13	30	19	25	24	14	13

Table D.—(Continued).

CRIME.	1864.	1865.	1866.	1867.	1868.	1869.	1870.	1871.	1872	1873.	1874	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.
K'png d'sd h'se, & s'lng l'qr w'thut lic	27																		
K'pug b'wd h'se, & s'lng l'qr w'out lic																			
Keeping gaming house	10	4	12	20	11	23	9	8	22	2	13	6		13	12	17		10	25
K'pug g'mg hse, & s'lg l'qr w'out lic.																			
Keeping lottery office																			
Letting bawdy-house		1																	
Libel			1	6		3	3	3	1			1	2		1	1			5
Malicious mischief	10	12	4	7	3	11	6	13	9	6	6	9	2	7	6	3	5	4	1
Malicious trespass																			3
Malpractice as physician																		1	
Marrying married person		1							2	1									
Mayhem	2		1				1	1	1	1							1		1
Misdemeanor	4	171	17	100	9	37	24	13	15	26	45	37	8	108	120	70	228	174	115
Nuisance	4	10	4	6	2				9	11					2		6	2	4
Official malpractice			1														6	1	
Obstructing highway																			1
Obstructing railroad track		1											3		3		2		1
Opening sealed letter																			
Perjury	2	1	4	2	2	9	8	4	3	2	8	11	5	33	7	7	8	7	6
Piloting without license					3														
Practicing as a physician unlicensed																			1
Prize fighting			1																
Procuring illegal voters																			
Publishing obscene papers, etc					1				1				5						
Receiving dead bodies, etc																			
Refusing to assist an officer					1								3						
Rescue									3									2	
Resisting public officer			3		4	5	2	2	1	3	1	7	1	2	3		2	1	3
Riot			9	39	9		15	47	50	13	24	15	2	49	15	9	10		3
Riot and attempt at rescue		12	33																
Riot and trespass																			
Selling goods at auction con'try to law																			
Selling liquor to Indians					1	1													
Selling liquor without license	233	68	301	272	177	253	180	206	250	101	88		5	31			225	84	
Selling liquor to minors									3	14									
Selling liquor without lic.& to Indians																			
Selling lottery tickets	3		1	5	2	2		3	1	3	1	3	1	2				2	1
Selling unwholesome provisions	1				1			1											
Selling liquor on Sunday			7		1				13	21	31							42	
Solicitation to commit felony														1					
Setting up lottery			3												1				
Selling obscene prints														6	1				

Selling unstamped oleomargarine																	4		
Sodomy														2					
Subornation of perjury													1						
Tavern sign, erecting without license																			
Trespass		1		1					2	2					12	3	6	5	2
Trespass on Indian lands																			
Unlawful assembly	1																		
Usury				1		9		1					1						
Violating quarantine law							1												
Violating the grave																			
Violating the gambling law														5					
Violating the emigrant law																			
Writing threatening letter		1																	
Not given			1	65			10			157		6					14		
Violating the excise law											227	354	403	212	388	700		116	253
Voting illegally											1	9	2	4	3		4	2	
Violating game law														11			1	1	3
	336	369	473	860	381	471	324	389	469	462	520	523	545	568	655	880	595	581	494
Total	1,430	2,036	2,665	2,559	2,384	2,463	2,151	2,340	2,298	2,919	3,368	3,423	3,451	3,827	3,829	3,216	2,847	2,923	2,877

TABLE E.

Giving the ages, nativity, and social relations of persons convicted in courts of record of the several counties, as reported to the office of the Secretary of State by the sheriffs of the respective counties, for the year ending October 31, 1882.

ALBANY COUNTY.	Assault to kill.	Assault with weap'n	Attempt to rob.	Bigamy.	Burglary.	Burg'ly and assault with weapon.	Burg. and larceny.	Burglary and rape.	Embezzlement.	False pretenses.	Forgery.	Grand larceny.	G. larceny & escape.	Larceny from pers.	Petit larceny.	P. L. after felony.	P. L. 2d offense.	Rape.	Receiving stol'n g'ds	Robbery.	Total.
Number reported	1	1	1	1	16	1	1	1	1	6	1	14	1	1	13	1	4	2	2	4	73
Males	1	1	1	1	16	1		1	1	5	1	14	1	1	13	1	4	2	2	4	71
Females							1			1											2
Under 15 years of age															1		1				2
From 15 to 21 years of age			1		10	1		1		1		2			2				1		19
From 21 to 25 years of age					2					1		8	1		2		1		1		16
From 25 to 30 years of age					2					1		2		1	3		1	1		1	12
From 30 to 40 years of age		1			1		1		1	3		1			2	1		1		3	15
From 40 to 50 years of age				1	1						1				3		1				7
From 50 to 60 years of age	1											1									2
Married	1	1		1	1				1	3	1	5	1		5		1			2	23
Single			1		15	1	1	1		3		9		1	8	1	3	2	2	2	50
Natives of United States	1	1	1	1	15	1	1	1	1	3	1	12	1	1	13	1	4	2	2	4	67
Natives of Ireland										2		1									3
Natives of England										1											1
Natives of Canada					1							1									2
Can read and write	1	1	1	1	13	1	1	1	1	6	1	14	1	1	13	1	4	2	2	3	69

Cannot read or write	....	....	....	....	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	4
Had religious instruction	1	1	1	1	16	1	1,	1	1	5	1	14	1	....	11	1	4	2	2	4	69
Never had religious instruction	....	....	....	....	....	....	....	....	....	1	....	....	....	1	2	....	....	....	....	....	4
Parents living	....	....	1	....	5	1	....	1	....	....	....	7	....	1	4	....	1	1	1	2	25
Father living	....	....	....	....	2	....	....	....	1	2	....	1	....	....	3	....	....	....	....	....	9
Mother living	....	....	....	....	5	....	....	....	....	1	1	5	1	....	3	1	1	1	1	1	21
Parents dead	1	1	....	....	4	....	1	....	....	3	....	1	....	....	3	....	2	....	....	1	17
Unknown	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1
Before convicted	....	1	....	1	12	1	....	1	1	1	1	5	....	....	11	1	4	1	1	3	45
Never before convicted	1	....	1	....	4	....	1	....	....	5	....	9	1	1	2	....	....	1	1	1	28
Unknown	1	1	1	1	16	1	1	1	1	6	1	14	1	1	13	1	4	2	2	4	73

Table A. — (Continued).

ALLEGANY COUNTY.

	Burglary.	Petit larceny.	P. L. 2d offense.	Total.		Burglary.	Petit larceny.	P. L. 2d offense.	Total.
Number reported	1	1	1	3	Unknown	....	1	....	1
Males	1	1	1	3	Unknown	1	1	1	3
From 25 to 30 years of age.	1	....	1	2	Unknown	1	1	1	3
Unknown	....	1	....	1	Unknown	1	1	1	3
Unknown	1	1	1	3	Unknown	1	1	1	3
Natives of United States.	1	....	....	1	Unknown.	1	1	1	3
Natives of Ireland	....	...	1	1					

BROOME COUNTY.

	Assault to harm.	Assault to kill.	Burglary.	Burglary & larceny.	False pretenses.	Forgery.	Robbery.	Grand larceny.	Total.
Number reported	1	1	1	1	1	1	2	3	11
Males	1	1	1	1	1	1	2	3	11
From 15 to 21 years of age	....	....	....	1	....	....	...	1	2
From 21 to 25 years of age	1	1	1	. ..	....	....	1	....	4
From 25 to 30 years of age	....	....	....	....	1	....	....	1	2
From 30 to 40 years of age	....	....	....	....	....	1	1	....	2
Over 60 years of age	....	....	....	....	....	....	....	1	1
Married	....	....	....	....	1	1	....	....	2
Single	1	1	1	1	....	....	2	3	9
Natives of United States	1	1	1	1	....	1	2	2	9
Natives of Ireland	....	....	....	....	....	....	....	1	1
Natives of Germany	....	....	....	....	1	....	....	....	1
Can read and write	....	....	1	1	....	1	2	2	7
Can read only	1	....	....	....	....	....	....	....	1
Cannot read or write	....	1	....	....	1	....	....	1	3
Had religious instruction	....	....	1	....	....	1	2	1	5
Never had religious instruction	1	1	....	1	1	....	....	2	6
Parents living	1	1	1	1	....	1	2	2	9
Mother living	....	....	....	....	1	....	....	....	1
Parents dead	....	....	....	....	....	....	....	1	1
Before convicted	1	1	1	1	....	....	....	2	6
Never before convicted	....	....	....	....	1	1	2	1	5
Temperate	....	....	....	1	1	....	....	....	2
Intemperate	1	1	1	....	....	1	2	3	9

Table E. — (Continued).

CATTARAUGUS COUNTY.

	Burglary.	Grand larceny.	Not stated.	Total.
Number reported	8	2	1	11
Males	8	2	1	11
From 15 to 21 years of age	2	2	.....	4
From 21 to 25 years of age	2	.. ..	.....	2
From 25 to 30 years of age	2	.....	.....	2
From 30 to 40 years of age	2	.....	.....	2
Unknown	.....	.....	1	1
Married	2	1	1	4
Single	6	1	.....	7
Natives of United States	6	2	1	9
Natives of Ireland	1	.....	.....	1
Natives of England	1	.....	.....	1
Can read and write	6	2	1	9
Cannot read or write	2	.....	.....	2
Had religious instruction	7	2	1	10
Unknown	1	.....	.....	1
Parents living	2	1	.....	3
Father living	1	.....	.....	1
Mother living	1	.....	.....	1
Parents dead	4	1	1	6
Before convicted	2	1	.....	3
Never before convicted	4	.....	1	5
Unknown	2	1	.....	3
Intemperate	8	2	1	11

CAYUGA COUNTY.

	Ass'lt and battery.	Attempt to rape.	Bigamy.	Burglary and larceny.	Forgery.	Grand larceny.	Keeping ganing house.	Larceny from person.	Petit larceny.	Petit larceny, 2nd offense.	Violating excise law.	Total.
Number reported	3	2	1	4	1	3	2	1	1	1	40	59
Males	3	2	1	4	1	3	2	1	1	1	37	56
Females	....	....	....	....	....	....	....	....	....	....	3	3
Under 15 years of age	....	....	....	....	....	....	....	....	1	....	....	1
From 15 to 21 years of age	....	....	....	1	....	....	....	....	....	....	....	1
From 21 to 25 years of age	1	1	1	....	....	....	....	....	....	....	....	3
From 25 to 30 years of age	1	....	....	1	....	1	....	....	....	....	....	3
From 30 to 40 years of age	....	1	....	2	....	2	....	1	....	1	....	7
From 40 to 50 years of age	....	....	....	....	1	....	....	....	....	....	....	1
Unknown	1	....	....	....	....	....	2	....	....	....	40	43
Married	....	....	1	2	1	1	....	....	....	....	....	5
Single	2	2	....	2	....	2	....	1	1	1	..	11
Unknown	1	....	....	....	....	....	2	....	....	....	40	43
Natives of United States	2	2	....	3	1	3	2	1	1	1	16	32
Natives of Ireland	1	....	1	1	....	....	....	....	....	....		6
Unknown	....	....	....	....	....	....	....	....	....	....	21	21

Table E. — Cayuga County — (Continued).

	Ass'lt and battery.	Attempt to rape.	Bigamy.	Burglary and larceny.	Forgery.	Grand larceny.	Keeping gaming house.	Larceny from person.	Petit larceny.	Petit larceny, 2nd offense.	Violating excise law.	Total.
Can read and write	2	2	1	3	1	3	....	1	1	1	....	15
Unknown	1	....	....	1	....	....	2	....	....	....	40	44
Had religious instruction	2	2	1	4	1	2	....	....	1	1	....	14
Never had religious instruction	....	....	....	....	...	1	....	1	....	....	....	2
Unknown	1	....	....	....	....	....	2	....	....	....	40	43
Parents living	1	1	1	2	....	3	....	....	1	1	....	10
Father living	....	....	....	....	....	....	....	1	....	....	....	1
Mother living	1	....	....	2	1	....	....	...	....	....	....	4
Unknown	1	1	....	....	....	....	2	....	....	....	40	44
Before convicted	....	1	....	1	1	1	....	....	....	....	....	4
Never before convicted	....	....	....	....	....	....	....	1	....	....	....	1
Unknown	3	1	1	3	....	2	2	....	1	1	40	54
Temperate	....	....	....	2	1	1	....	....	....	....	....	4
Intemperate	....	....	1	1	...	1	....	1	....	....	....	4
Unknown	3	2	....	1	....	1	2	....	1	1	40	51

CHAUTAUQUA COUNTY.

	Burglary and larceny.	Burglary and larceny and receiving stolen goods.	Total.
Number reported	9	1	10
Males	9	1	10
From 15 to 21 years of age	6	1	7
From 21 to 25 years of age	2	....	2
From 30 to 40 years of age	1	....	1
Single	2	1	3
Unknown	7	....	7
Natives of United States	9	1	10
Unknown	9	1	10
Never had religious instruction	5	1	6
Unknown	4	....	4
Parents living	5	....	5
Father living	.....	1	1
Mother living	2	....	2
Parents dead	1	....	1
Unknown	1	....	1
Unknown	9	1	10
Unknown	9	1	10

Table E. — (Continued.)

CHEMUNG COUNTY.

	Burglary.	Burglary & larceny.	Embezzlement.	False pretenses.	Forgery.	Grand larceny.	Larc'y from person.	Petit larceny.	Viola'g excise law.	Robbery.	Total.
Number reported	1	3	1	1	2	5	2	1	1	2	19
Males	1	3	1	1	2	4	2	1	1	2	18
Females	....	....	....	....	....	1	....	....	....	....	1
From 15 to 21 years of age	1	....	....	....	1	1	....	1	....	....	4
From 21 to 25 years of age	....	....	....	....	....	1	....	....	....	1	2
From 25 to 30 years of age	....	2	....	....	1	2	1	....	....	1	7
From 30 to 40 years of age	....	1	1	1	....	1	1	....	....	....	5
From 50 to 60 years of age	....	....	....	....	....	....	....	....	1	....	1
Married	....	1	1	1	1	2	1	....	1	....	8
Single	1	2	....	....	1	3	1	1	....	2	11
Natives of United States	1	1	1	1	2	4	2	....	....	2	14
Natives of Canada	....	....	....	....	....	1	....	....	....	....	1
Unknown	....	2	....	....	....	....	....	1	1	....	4
Can read and write	1	3	1	1	2	5	2	1	1	2	19
Unknown	1	3	1	1	2	5	2	1	1	2	19
Parents living	....	2	....	1	2	2	1	1	...	1	10
Mother living	....	....	1	....	....	2	1	....	....	1	5
Parents dead	1	1	....	....	....	....	....	.. .	1	....	3
Unknown	....	....	....	....	....	1	....	....	....	....	1
Before convicted	.	....	....	....	1	....	....	....	....	....	1
Never before convicted	1	....	1	1	....	4	1	....	1	....	9
Unknown	...	3	....	....	1	1	1	1	....	2	9
Unknown	1	3	1	1	2	5	2	1	1	2	19

CHENANGO COUNTY.

	Petit larceny.	Total.		Petit larceny.	Total.
Number reported	3	3	Never had religious instruct'n.	3	3
Males	1	1	Mother living	2	2
Females	2	2	Parents dead	1	1
From 30 to 40 years of age	3	3	Before convicted	2	2
Married	2	2	Never before convicted	1	1
Single	1	1	Temperate	1	1
Natives of United States	3	3	Intemperate	2	2
Cannot read or write	3	3			

Table E. — (Continued).

CLINTON COUNTY.

	Assault to kill.	Burglary.	Grand larceny.	Petit larceny.	Total.
Number reported	1	4	1	1	7
Males	1	4	1	1	7
From 15 to 21 years of age		1			1
From 21 to 25 years of age	1	1			2
From 30 to 40 years of age		2	1		3
Unknown				1	1
Married	1	3	1		5
Single		1		1	2
Natives of the United States	1	4	1	1	7
Can read and write		4	1	1	6
Can read only	1				1
Had religious instruction	1	1	1		3
Never had religious instruction				1	1
Unknown		3			3
Parents living		1	1	1	3
Father living	1				1
Unknown		3			3
Before convicted	1		1		2
Never before convicted		1		1	1
Unknown		3			3
Intemperate	1	1	1	1	4
Unknown		3			3

COLUMBIA COUNTY.

	Assault and battery.	Arson.	Burglary.	Grand larceny.	Jail breaking.	Larc'y from person.	Murder.	Petit larceny.	Total.
Number reported	1	2	3	2	2	2	1	2	15
Males	1	2	3	2	2	2	1	2	15
From 21 to 25 years of age	1				1	1			3
From 25 to 30 years of age			1			1		1	3
From 30 to 40 years of age		2	2	2	1		1	1	9
Married		1	1	1	1			1	5
Single	1	1	2	1	1	2	1	1	10
Natives of United States	1	2	3	1	2	2	1	2	14
Natives of Ireland				1					1
Can read and write	1	2	3	2	2	2		2	14
Cannot read or write							1		1
Unknown	1	2	3	2	2	2	1	2	15
Parents living					1	1		1	3
Father living							1		1
Mother living	1			1				1	3
Parents dead		2	3	1	1	1			8
Before convicted		2	2	1	2	2			9
Never before convicted	1		1	1			1	2	6
Unknown	1	2	3	2	2	2	1	2	15

Table E. — (Continued).

CORTLAND COUNTY.

	Burglary.	Grand larceny.	Manslaughter.	Petit larceny, 2nd offense.	Total.
Number reported	2	2	1	1	6
Males	2	2	......	1	5
Females	......	......	1	......	1
From 15 to 21 years of age	1	......	......	......	1
From 25 to 30 years of age	......	......	......	1	1
From 30 to 40 years of age	......	2	1	......	3
From 40 to 50 years of age	1	......	......	......	1
Married	1	1	......	1	3
Single	1	1	1	......	3
Natives of United States	2	1	1	1	5
Natives of Canada	......	1	......	......	1
Can read and write	2	2	......	......	4
Cannot read or write	......	......	1	1	2
Had religious instruction	2	2	......	1	5
Never had religious instruction	......	......	1	......	1
Parents living	......	......	......	......	2
Father living	2	......	......	......	......
Parents dead	......	2	1	1	4
Before convicted	1	1	......	1	3
Never before convicted	1	1	1	......	3
Temperate	2	2	1	1	6

Table E. — (Continued).

COUNTY OF ERIE.

	Assault and battery.	Assault to harm.	Assault to kill.	Bigamy.	Burglary.	Burglary and larceny.	Conspiracy.	Embezzlement.	Forgery.	Grand larceny.	Incest.	Larceny after felony.	Larceny from person.	Nuisance.	Petit larceny.	Petit larceny, 2d offense.	Receiving stolen goods.	Robbery.	Robbery after felony.	Seduction.	Stoning railroad train.	Total.
Number reported	3	1	3	3	1	18	3	1	1	16	2	3	8	2	2	7	5	5	1	1	2	88
Males	3	1	3	2	1	17	3	1	1	15	1	2	7	2	2	7	4	5	1	1	2	81
Females	....	....	....	1	....	1	....	....	....	1	1	1	1	....	....	....	1	....	....	....	....	7
Under 15 years of age	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1
From 15 to 21 years of age	....	....	....	....	....	8	....	....	....	1	1	1	1	....	....	1	1	2	....	....	2	18
From 21 to 25 years of age	1	....	....	1	....	6	....	....	....	5	....	2	1	....	2	5	....	1	....	1	....	25
From 25 to 30 years of age	....	....	....	1	....	....	....	....	....	3	1	....	3	....	....	1	2	1	1	....	....	13
From 30 to 40 years of age	2	....	1	1	1	....	2	1	1	5	....	....	3	....	....	....	2	1	....	....	....	20
From 40 to 50 years of age	....	1	1	....	....	1	1	....	....	2	....	....	....	....	....	....	....	....	....	....	....	6
From 50 to 60 years of age	....	....	....	....	....	1	....	....	....	....	....	....	....	2	....	....	....	....	....	....	....	3
Over 60 years of age	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1
Unknown	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1
Married	2	1	3	3	1	2	3	....	1	5	1	....	1	1	....	2	1	....	....	1	....	28
Single	1	....	....	....	....	15	....	1	....	10	1	3	7	1	2	5	4	5	1	....	2	58
Unknown	....	....	....	....	....	1	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	2
Natives of United States	2	1	1	1	1	14	3	1	....	10	2	2	8	2	1	7	3	5	1	1	2	68
Natives of Ireland	....	....	....	....	....	1	....	....	1	....	....	....	....	....	....	....	2	....	....	....	....	4
Natives of Germany	1	....	2	2	....	....	....	....	....	2	....	....	....	....	1	....	....	....	....	....	....	8
Natives of England	....	....	....	....	....	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2
Natives of France	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	1
Natives of Canada	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	1
Other foreign countries	....	....	....	....	....	....	....	....	....	2	....	....	....	....	....	....	....	....	....	....	...	2
Unknown	....	....	....	....	....	1	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	2
Can read and write	3	1	3	3	1	17	3	1	1	16	2	3	8	2	2	7	5	5	1	1	2	87
Unknown	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1
Unknown	3	1	3	3	1	18	3	1	1	16	2	3	8	2	2	7	5	5	1	1	2	88

Parents living	2	....	....	....	1	6	2	....	....	3	2	....	4	....	1	1	....	2	....	....	...	24
Father living	....	....	....	....	....	1	1	....	....	1	....	....	....	....	....	1	2	1	....	....	....	7
Mother living	....	....	....	1	....	5	....	1	....	4	....	3	1	....	1	2	1	2	1	1	2	25
Parents dead	1	1	3	2	....	5	....	....	1	8	....	....	3	2	....	3	1	....	....	....	....	30
Unknown	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	2
Unknown	3	1	3	3	1	18	3	1	1	16	2	3	8	2	2	7	5	5	1	1	2	88
Unknown	3	1	3	3	1	18	3	1	1	16	2	3	8	2	2	7	5	5	1	1	2	88

Table E.— (Continued).

ESSEX COUNTY.

	Assault and resisting officer.	Attempt to rape.	Grand larceny.	Practicing medicine unlicensed.	Rape.	Riot.	Violating excise law.	Total.
Number reported	2	1	1	1	1	3	10	19
Males	2	1	1	1	1	3	10	19
From 30 to 40 years of age		1		1	1			3
From 40 to 50 years of age			1				1	2
Unknown	2					3	9	14
Married		1					2	3
Single	2		1	1	1	2	2	9
Unknown						1	6	7
Natives of United States	2	1		1	1	2	4	11
Natives of Canada			1					1
Unknown						1	6	7
Can read and write	2		1	1	1	2	4	11
Cannot read or write		1						1
Unknown						1	6	7
Had religious instruction	2		1	1		2	4	10
Never had religious instruction		1			1			2
Unknown						1	6	7
Parents living	2							2
Mother living		1		1				2
Parents dead							1	1
Unknown			1		1	3	9	14
Before convicted	2	1		1	1		1	6
Never before convicted			1			2	3	6
Unknown						1	6	7
Temperate			1	1			3	5
Intemperate	2	1			1	3	1	8
Unknown							6	6

FRANKLIN COUNTY.

	Arson, 1st degree.	Total.		Arson, 1st degree.	Total.
Number reported	1	1	Cannot read or write	1	1
Males	1	1	Had religious instruction	1	1
Over 60 years of age	1	1	Parents dead	1	1
Married	1	1	Never before convicted	1	1
Natives of Canada	1	1	Temperate	1	1

Table E.— (Continued).

FULTON COUNTY.

	Grand larceny.	Total.		Grand larceny.	Total.
Number reported	1	1	Can read and write	1	1
Males	1	1	Had religious instruction	1	1
From 15 to 21 years of age	1	1	Parents living	1	1
Single	1	1	Never before convicted	1	1
Natives of United States	1	1	Intemperate	1	1

GENESEE COUNTY.

	Assault and battery.	Assault and resisting officer.	Assault on officer.	Assault to kill.	Bigamy.	Burglary and larceny.	Grand larceny.	Stoning railroad train.	Total.
Number reported	1	1	1	1	1	1	1	1	8
Males	1	1	1	1	....	1	1	1	7
Females	....	....	....	....	1	....	....	....	1
From 15 to 21 years of age	....	....	....	....	....	1	....	....	1
From 25 to 30 years of age	1	....	....	....	....	....	....	....	1
From 30 to 40 years of age	....	....	....	1	1	....	....	1	3
From 50 to 60 years of age	....	1	1	....	....	....	....	....	2
Over 60 years of age	....	....	....	....	....	....	1	....	1
Married	1	1	1	1	1	....	1	....	6
Single	....	....	....	....	....	1	...	1	2
Natives of United States	....	....	....	1	1	1	1	...	4
Natives of Ireland	....	1	1	....	....	....	....	....	2
Other foreign countries	1	....	....	....	....	....	. ..	1	2
Can read and write	1	1	....	....	1	1	1	1	6
Cannot read or write	....	....	1	1	....	....	....	....	2
Unknown	1	1	1	1	1	1	1	1	8
Parents living	....	....	....	1	....	....	....	....	1
Parents dead	1	....	....	....	1	1	1	1	5
Unknown	....	1	1	....	....	....	....	....	2
Before convicted	....	....	....	....	....	....	....	1	1
Never before convicted	....	....	....	....	1	1	1	....	3
Unknown	1	1	1	1	....	. ..	....	....	4
Temperate	1	....	....	....	1	1	1	....	4
Intemperate	....	1	1	1	....	....	....	1	4

Table E. — (Continued).

HERKIMER COUNTY.

	Assault and battery.	Bigamy.	Burglary and larceny.	False pretenses.	Forgery.	Grand larceny.	Murder.	Petit larceny.	Receiving stolen goods.	Resisting officer.	Violating excise law.	Total.
Number reported	1	1	1	1	1	6	1	3	1	2	1	19
Males	1	1	1	1	1	6	1	3	1	2	1	19
From 15 to 21 years of age	....	....	1	....	1	2	....	....	1	....	....	5
From 21 to 25 years of age	....	....	....	1	....	1	....	....	....	....	...	2
From 25 to 30 years of age	.. .	....	....	....	....	2	....	....	....	....	...	2
From 30 to 40 years of age	....	1	....	...	....	....	....	....	....	....	....	1
From 40 to 50 years of age	....	....	....	....	....	1	1	....	....	....	....	2
Unknown	1	....	....	....	....	....	. ..	3	....	2	1	6
Married	1	1	....	....	....	1	....	2	....	2	1	8
Single	...	....	1	1	1	5	1	1	1	....	....	11
Natives of United States	....	1	1	1	1	5	....	3	1	2	1	16
Natives of Ireland	....	....	....	....	....	....	1	....	....	....	....	1
Natives of Germany	1	....	...	.. .	....	1	...	....	....	....	....	2
Can read and write	1	1	....	1	1	3	1	3	....	2	1	14
Cannot read or write	....	....	1	....	....	2	....	....	1	....	....	4
Unknown	. ..	....	....	....	....	1	....	....	....	....	....	1
Had religious instruction	....	1	....	1	1	3	....	1	....	....	....	7
Never had religious instruction	....	....	1	....	....	2	1	1	1	....	....	6
Unknown	1	....	....	....	....	1	....	1	....	2	1	6
Parents living	....	....	. ..	....	....	....	....	1	....	....	....	1
Father living	....	....	....	1	1	....	....	....	....	....	....	2
Mother living	....	...	....	....	....	4	....	1	...	....	....	5
Parents dead	....	....	....	....	....	1	1	1	....	....	....	3
Unknown	1	1	1	....	....	1	....	....	1	2	1	8
Before convicted	....	....	....	1	1	....	....	....	....	....	....	2
Unknown	1	1	1	....	....	6	1	3	1	2	1	17
Temperate	1	....	....	...	....	....	....	3	....	....	....	4
Intemperate	....	1	1	1	1	....	1	....	1	....	....	6
Unknown	....	....	....	....	....	6	...	....	....	2	1	9

JEFFERSON COUNTY.

	Petit larceny, 2d offense.	Violating excise law.	Total.
Number reported	1	1	2
Males	1	1	2
From 25 to 30 years of age	1	....	1
Over 60 years of age	....	1	1
Married	1	1	2
Natives of United States	1	1	2
Can read and write	1	1	2
Unknown	1	1	2
Parents living	1	....	1
Parents dead	....	1	1
Before convicted	1	....	1
Never before convicted	....	1	1
Temperate	1	....	1
Intemperate	....	1	1

Table E. — (Continued).

KINGS COUNTY.

	Aiding escape.	Assault & battery.	Attempt burglary.	Attempt grand larceny.	Burglary.	Burglary and larceny.	Carrying conc'led weapons.	Disorderly house.	Felonious assault.	Forgery.	Grand larceny.	Grand larceny and receiving stolen goods.	Grand larceny from dwelling.	Manslaughter.	Misdemeanor.	Petit larceny.	Seduction.	Sodomy.	Receiving stolen goods.	Total.
Number reported	1	2	3	2	4	13	1	1	2	1	5	2	1	3	1	4	2	1	1	50
Males	1	2	3	2	4	13	1	....	2	1	5	2	....	3	1	4	2	1	1	48
Females	....	....	....	....	....	....	....	1	....	....	....	....	1	....	....	....	....	....	....	2
From 15 to 21 years of age	....	....	1	....	....	3	....	....	....	....	3	....	....	....	....	....	....	....	....	7
From 21 to 25 years of age	....	1	....	....	....	7	1	....	1	....	2	....	1	....	....	2	2	1	....	18
From 25 to 30 years of age	1	1	1	....	3	....	....	....	1	....	....	1	....	1	....	1	....	....	....	10
From 30 to 40 years of age	....	....	....	2	1	2	....	....	....	....	....	....	....	....	1	1	....	....	1	8
From 40 to 50 years of age	....	....	1	....	....	1	....	....	....	1	....	....	....	1	....	....	....	....	....	4
From 50 to 60 years of age	....	....	....	....	....	....	....	1	....	....	....	....	....	1	....	....	....	....	....	2
Over 60 years of age	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	1
Married	....	1	1	1	1	4	....	1	1	1	1	2	1	1	....	....	....	....	....	16
Single	1	1	2	1	3	9	1	....	1	....	4	....	....	2	1	4	2	1	1	34
Natives of United States	1	1	2	....	3	11	1	....	2	....	3	....	....	....	....	2	2	....	1	29
Natives of Ireland	....	1	1	2	1	2	....	1	....	....	....	....	....	1	....	1	....	....	....	10
Natives of Germany	....	....	....	....	....	....	....	....	....	1	....	....	....	....	1	1	....	....	....	3
Natives of England	....	....	....	....	..	....	....	....	....	....	....	2	1	....	....	....	....	....	....	3
Other foreign countries	....	....	....	....	....	....	....	....	....	....	2	....	....	2	....	....	....	1	....	5
Can read and write	1	2	8	2	4	13	1	....	2	1	5	2	1	3	1	4	2	1	1	49
Cannot read or write	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	1
Unknown	1	2	3	2	4	13	1	1	2	1	5	2	1	3	1	4	2	1	1	50
Parents living	1	1	2	2	2	4	....	....	....	....	....	2	....	2	1	1	....	....	....	18
Father living	....	....	....	....	....	....	....	....	....	....	3	....	1	....	....	....	....	....	....	4
Mother living	....	1	1	....	1	2	1	....	....	....	1	....	....	1	....	....	1	1	1	11
Unknown	....	....	....	....	1	7	....	1	2	1	1	....	....	....	....	3	1	....	....	17
Never before convicted	1	2	3	2	4	13	1	1	2	1	5	2	1	3	1	4	2	1	1	50
Temperate	1	2	3	2	4	13	1	1	2	1	5	2	1	3	1	4	2	1	1	50

Table E.— (Continued).

MADISON COUNTY.

	Burglary and larceny.	Grand larceny.	Total.
Number reported	1	5	6
Males	1	5	6
Under 15 years of age	1	......	1
From 15 to 21 years of age	......	1	1
From 25 to 30 years of age	......	3	3
From 30 to 40 years of age	......	1	1
Single	1	......	1
Unknown	......	5	5
Natives of United States	1	3	4
Natives of England	......	1	1
Unknown	......	1	1
Can read and write	......	5	5
Cannot read or write	1	......	1
Had religious instruction	......	3	3
Never had religious instruction	1	2	3
Parents living	1	3	4
Father living	....	1	1
Parents dead	......	1	1
Never before convicted	1	5	6
Temperate	1	2	3
Intemperate	......	3	3

MONROE COUNTY.

	Assault to kill.	Burglary.	Forgery.	Grand larceny.	Murder.	Petit larceny, 2d offense.	Stoning railroad train.	Total.
Number reported	1	3	1	2	2	2	1	12
Males	1	3	......	2	2	2	1	11
Females	......	......	1	......	......	......	......	1
From 15 to 21 years of age	......	2	......	......	......	......	......	2
From 21 to 25 years of age	......	......	......	1	......	1	......	2
From 25 to 30 years of age	......	......	......	......	......	......	1	1
From 30 to 40 years of age	......	......	......	1	......	......	......	1
From 40 to 50 years of age	......	1	......	......	1	1	......	3
Over 60 years of age	......	......	......	......	1	......	......	1
Unknown	1	......	1	......	......	......	......	2
Married	......	1	......	......	1	1	......	3
Single	......	2	......	2	1	1	1	7
Unknown	1	......	1	......	......	......	......	2
Natives of United States	......	2	......	1	......	......	1	4
Natives of Ireland	......	......	......	......	1	......	......	1
Natives of Germany	......	1	......	......	1	......	......	2
Natives of Canada	......	......	......	......	......	1	......	1
Other foreign countries	......	......	......	1	......	1	......	2
Unknown	1	......	1	......	......	......	......	2
Can read and write	......	3	......	1	2	2	1	9
Cannot read or write	......	......	......	1	......	......	......	1
Unknown	1	......	1	......	......	......	......	2
Unknown	1	3	1	2	2	2	1	12
Unknown	1	3	1	2	2	2	2	12
Before convicted	......	......	......	1	......	2	1	4
Never before convicted	......	3	......	1	2	......	......	6
Unknown	1	......	1	......	......	......	......	2
Unknown	1	3	1	2	2	2	1	12

Table A. — (Continued).

MONTGOMERY COUNTY.

	Burglary.	Burglary and larceny.	Forgery.	Grand larceny.	Lar'ny from person.	Ston'g railr'd train.	Total.
Number reported	3	1	1	1	1	1	8
Males	3	1	1	1	1	1	8
From 15 to 21 years of age	2	......	......	1	......	......	3
From 21 to 25 years of age	1	1	......	......	1	......	3
From 25 to 30 years of age	......	......	......	......	......	1	1
From 30 to 40 years of age	......	......	1	......	......	......	1
Single	3	1	1	1	1	1	8
Natives of United States	3	1	......	1	......	1	6
Natives of Ireland	......	......	......	......	1	......	1
Natives of Canada	......	......	1	......	......	......	1
Can read and write	3	1	1	1	1	1	8
Had religious instruction	1	......	......	......	......	......	1
Unknown	2	1	1	1	1	1	7
Parents living	3	1	1	......	1	......	6
Father living	......	......	......	1	......	......	1
Mother living	......	......	......	......	......	1	1
Before convicted	......	......	......	......	1	......	1
Unknown	3	1	1	1	.....	1	7
Unknown	3	1	1	1	1	1	8

Table E. — (Continued).

NEW YORK COUNTY.

	Assault and battery.	Attempt at sodomy.	Assault to harm.	Attempt at burglary.	Attempt larceny from person.	Assault with weapon.	Attempt to rape.	Attempt at extortion.	Assault.	Adulterating milk.	Assault to kill.	Abortion.	Abduction.	Arson.	Assault to steal.	Attempt at grand larceny.	Attempt at petit larceny.	Attempt at forgery.	Attempt at assault and battery.	Attempt at robbery.	Burglary.	Bigamy.	Carrying concealed weapons.	Carrying burglars' tools.	Conspiracy.	Disorderly house.	Embezzlement.	False pretenses.	Forgery.
Number reported	78	1	15	56	5	32	3	2	12	19	8	1	3	1	3	21	12	1	1	1	251	5	5	4	2	26	16	45	24
Males	72	1	15	56	5	30	3	2	12	18	8	......	1	1	3	20	12	1	1	1	250	5	5	4	2	17	16	44	23
Females	6	......	......	......	......	2	......	......	......	1	......	1	2	......	......	1	......	......	......	......	1	......	......	......	......	9	......	1	1
Under 15 years of age	......	......	......	2	......	......	......	......	......	......	......	......	......	......	......	......	1	......	......	......	10	......	......	......	......	......	......	1	......
From 15 to 21 years of age	18	......	6	21	3	6	2	......	1	2	1	......	......	......	1	4	5	......	1	4	1106	......	3	1	......	......	2	6	5
From 21 to 25 years of age	18	......	6	17	1	6	1	1	4	1	5	......	1	......	1	9	4	......	......	......	54	2	......	......	......	2	4	9	6
From 25 to 30 years of age	17	1	2	5	1	6	......	1	5	......	1	......	......	1	1	3	2	......	......	......	41	......	......	......	1	3	3	6	6
From 30 to 40 years of age	9	......	......	10	......	11	......	......	2	3	1	......	......	......	......	3	......	1	......	......	30	3	1	2	......	6	4	7	3
From 40 to 50 years of age	11	......	1	1	......	3	......	......	......	11	......	......	......	......	......	2	......	......	......	......	10	......	1	1	1	13	2	6	3
From 50 to 60 years of age	4	......	......	......	......	......	......	......	......	2	......	......	1	......	......	......	......	......	......	......	......	......	......	......	......	1	1	7	1
Over 60 years of age	1	......	......	......	......	......	......	......	......	......	......	1	......	......	......	......	......	......	......	......	......	......	......	......	......	1	......	2	......
Unknown	......	......	......	......	......	......	......	......	......	......	......	......	1	......	......	......	......	......	......	......	......	......	......	......	......	......	......	1	......
Married	24	1	6	6	1	7	2	2	5	9	3	1	3	1	1	6	2	......	......	......	31	5	1	1	1	19	6	17	8
Single	54	......	9	50	4	25	1	......	7	10	5	......	......	......	2	15	10	1	1	1	220	......	4	3	1	7	10	28	16
Natives of United States	58	1	11	47	5	21	2	1	9	11	7	......	2	......	3	19	11	1	......	1	209	4	3	4	......	18	13	36	17
Natives of Ireland	11	......	1	4	......	1	......	......	1	2	1	......	1	1	......	......	1	......	......	......	16	1	......	......	......	......	......	6	1
Natives of Germany	5	......	2	2	......	3	......	1	......	6	......	1	......	......	......	2	......	......	1	......	11	......	......	......	......	4	2	1	4
Natives of England	......	......	1	1	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	4	......	......	......	......	......	1	......	2
Natives of Scotland	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
Natives of France	2	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	1	2	......	......	......
Natives of Canada	......	......	......	1	......	1	......	......	......	......	......	......	......	......	......	......	......	......	......	......	3	......	......	......	......	......	......	1	......
Other foreign countries	2	......	......	1	......	6	1	......	2	......	......	......	......	......	......	......	......	......	......	......	8	......	2	......	1	2	......	1	......
Can read and write	68	1	15	55	5	28	3	1	12	14	8	1	2	1	3	20	12	1	1	1	248	5	4	4	1	23	15	43	24
Cannot read or write	10	......	......	1	......	4	......	1	......	5	......	......	1	......	......	1	......	......	......	......	3	......	1	......	1	3	1	2	...
Unknown	78	1	15	56	5	32	3	2	12	19	8	1	3	1	3	21	12	1	1	1	251	5	5	4	2	26	16	45	24
Parents living	4	......	2	3	......	3	2	......	......	......	......	......	......	......	......	......	2	......	......	......	17	......	......	......	......	......	1	1	......
Father living	3	......	3	7	......	1	......	1	2	......	......	......	......	......	......	5	......	......	......	......	20	1	1	......	......	1	1	2	1
Mother living	3	1	1	2	......	1	1	1	......	......	......	......	1	......	......	......	1	......	1	......	12	......	1	1	......	1	......	2	......
Parents dead	68	......	9	44	5	27	......	......	10	19	8	1	2	1	3	16	9	1	......	1	202	4	4	3	2	24	14	40	23
Before convicted	9	1	2	8	1	5	1	......	1	......	......	......	1	......	3	1	......	......	1	......	30	......	1	......	......	3	2	1	2
Never before convicted	69	......	13	46	4	27	2	2	11	19	8	1	2	1	......	19	12	1	......	1	221	5	4	4	2	23	14	44	22
Temperate	52	......	14	53	5	27	2	......	10	16	8	1	2	1	3	19	11	1	1	1	247	4	3	4	1	24	16	41	24
Intemperate	26	1	1	3	......	5	1	2	2	3	......	......	1	......	......	2	1	......	......	......	4	1	2	......	1	2	......	4	......

Table E. — *New York County* — (Continued).

	Grand larceny.	Gambling.	Indecent assault.	Illegal voting.	Indecent exposure.	Larceny from person.	Manslaughter.	Murder.	Not stated.	Petit larceny.	Policy.	Pool selling.	Practicing medicine unlicensed.	Perjury.	Robbery.	Rape and incest.	Receiving stolen goods.	Rescuing prisoner.	Rape.	Violating excise law.	Violating lottery law.	Violating barrel act.	Sneak thief.	Sailors' boarding house.	Winning money on betting.	Stoning street car.	Unintelligibly abbreviated.	Total.
Number reported	304	11	1	1	1	203	23	6	1	312	1	1	6	1	19	1	19	2	2	58	13	2	1	1	1	2	1	1647
Males	269	11	1	1	1	195	19	6	1	273	1	1	6	1	18	1	19	2	2	55	13	2	1	1	1	2	1	1532
Females	35	......	......	......	......	8	4	......	......	39	......	......	......	......	1	......	......	......	......	3	......	......	......	......	......	......	......	115
Under 15 years of age	10	......	......	......	......	13	......	......	......	10	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	47
From 15 to 21 years of age	98	......	......	......	......	83	1	1	......	101	......	......	......	......	4	......	5	......	......	1	......	......	......	......	......	1	1	491
From 21 to 25 years of age	74	......	......	......	......	51	5	1	1	66	......	......	......	......	7	......	7	......	......	5	2	......	1	......	1	1	......	374
From 25 to 30 years of age	48	......	......	1	......	24	6	2	......	45	......	......	1	......	2	......	3	2	......	6	2	......	......	......	......	......	......	248
From 30 to 40 years of age	51	6	1	......	......	20	9	1	......	44	......	1	3	1	6	......	1	......	1	15	3	......	......	......	......	......	......	262
From 40 to 50 years of age	14	5	......	......	1	11	1	......	......	32	......	......	2	......	......	1	2	......	1	27	2	2	......	......	......	......	......	167
From 50 to 60 years of age	4	......	......	......	......	......	1	1	......	10	......	......	......	......	......	......	......	......	......	3	3	......	......	......	......	......	......	39
Over 60 years of age	2	......	......	......	......	1	......	......	......	4	1	......	......	......	......	......	1	......	......	1	1	......	......	1	......	......	......	17
Unknown	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	2
Married	75	7	1	......	1	31	9	4	1	86	......	1	3	......	8	1	3	1	1	38	7	2	......	1	......	......	......	450
Single	229	4	......	1	......	172	14	2	......	226	1	......	3	1	11	......	16	1	1	20	6	......	1	......	1	2	1	1197
Natives of United States	239	11	......	1	1	185	14	5	1	242	1	1	5	......	15	......	16	2	......	28	8	......	1	......	......	2	1	1292
Natives of Ireland	17	......	......	......	......	11	6	1	......	29	......	......	1	......	2	......	......	......	1	10	......	2	......	1	1	......	......	131
Natives of Germany	18	......	......	......	......	2	......	......	......	24	......	......	......	1	......	......	1	......	......	19	5	......	......	......	......	......	......	115
Natives of England	10	......	1	......	......	3	......	......	......	4	......	......	......	......	......	1	1	......	......	......	......	......	......	......	......	......	......	29
Natives of Scotland	1	......	......	......	......	......	1	......	......	......	......	......	......	......	1	......	......	......	......	......	......	......	......	......	......	......	......	3
Natives of France	7	......	......	......	......	1	1	......	......	1	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	15
Natives of Canada	......	......	......	......	......	1	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	7
Other foreign countries	12	......	......	......	......	......	1	......	......	12	......	......	......	......	1	......	1	......	1	1	......	......	......	......	......	......	......	55
Can read and write	289	10	......	1	1	195	20	6	1	296	1	1	6	1	19	......	18	2	1	47	12	2	1	1	1	2	1	1554
Cannot read or write	15	1	1	......	......	8	3	......	......	16	......	......	......	......	......	1	1	......	1	11	1	......	......	......	......	......	......	93
Unknown	301	11	1	1	1	203	23	6	1	312	1	1	6	1	19	1	19	2	2	58	13	2	1	1	1	2	1	1647
Parents living	20	......	......	......	......	21	......	1	......	20	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	97
Father living	14	......	......	......	......	14	......	......	......	21	......	......	......	......	......	......	1	......	......	2	......	......	......	......	......	1	......	102
Mother living	22	......	......	......	......	10	1	1	......	18	......	......	......	......	1	......	2	......	......	1	......	......	......	......	......	......	......	85
Parents dead	248	11	1	1	1	158	22	4	1	253	1	1	6	1	18	1	16	2	2	55	13	2	1	1	1	1	1	1363
Before convicted	41	......	......	......	......	27	1	......	......	16	......	......	......	......	3	......	4	......	......	1	......	......	......	......	......	1	......	168
Never before convicted	263	11	1	1	1	176	22	6	1	296	1	1	6	1	16	1	15	2	2	57	13	2	1	1	1	1	1	1479
Temperate	295	10	......	1	......	196	22	6	1	301	1	1	6	1	19	......	19	2	2	51	13	2	1	1	1	2	1	1546
Intemperate	9	1	1	......	1	7	1	......	......	11	......	......	......	......	......	1	......	......	......	7	......	......	......	......	......	......	......	101

Table E. — (Continued).

NIAGARA COUNTY.

	Assault and battery.	Burglary.	Burglary and larceny.	Grand larceny.	Larceny from person.	Murder.	Petit larceny.	Robbery.	Stoning railroad train.	Total.
Number reported	1	4	1	7	2	1	1	1	1	19
Males	1	4	1	7	2	1	1	1	1	19
From 15 to 21 years of age	....	....	1	....	1	....	....	....	....	2
From 21 to 25 years of age	....	2	...	1	....	1	....	1	...	5
From 25 to 30 years of age	1	1	....	4	1	....	....	....	....	7
From 30 to 40 years of age	....	1	....	1	....	....	....	....	1	3
Over 60 years of age	....	....	....	1	....	...	1	....	....	2
Married	....	....	....	2	....	1	1	....	....	4
Single	1	4	1	5	2	....	....	1	1	15
Natives of United States	1	3	1	7	2	1	1	1	1	18
Natives of Canada	....	1	....	....	....	....	....	....	....	1
Can read and write	1	4	1	7	2	1	1	1	1	19
Had religious instruction	1	4	1	7	2	1	1	1	1	19
Parents living	1	4	1	....	2	1	....	....	....	9
Mother living	....	....	....	4	....	....	....	....	....	4
Parents dead	....	....	....	3	....	....	1	1	1	6
Before convicted	....	1	....	2	....	....	....	....	....	3
Never before convicted	1	3	1	5	2	1	....	1	1	15
Unknown	....	....	....	....	....	....	1	....	...	1
Unknown	1	4	1	7	2	1	1	1	1	19

Table E. — (Continued).

ONEIDA COUNTY.

	Assault.	Assault to harm.	Assault to kill.	Ass'lt with weapon.	Burglary.	Extortion.	Grand larceny.	Insane.	Larceny from person.	Manslaughter.	Petit larceny.	Rape.	Receiving stolen goods.	Total.
Number reported	1	2	1	1	3	2	4	1	1	1	2	2	1	22
Males	1	2	1	1	3	2	4	1	1	1	2	2	1	22
From 15 to 21 years of age	......	......	......	1	1	......	......	......	......	......	1	1	......	4
From 21 to 25 years of age	......	1	1	......	1	......	......	......	1	......	1	......	......	5
From 25 to 30 years of age	......	1	......	......	......	2	......	......	......	......	......	......	......	3
From 30 to 40 years of age	1	......	......	......	1	......	......	......	......	......	......	......	1	3
From 40 to 50 years of age	......	......	......	......	......	......	4	1	......	1	......	......	......	6
From 50 to 60 years of age	......	......	......	......	......	......	......	......	......	......	......	1	......	1
Married	1	......	1	......	1	2	4	......	1	1	......	......	1	12
Single	......	2	......	1	2	......	......	1	......	......	2	2	......	10
Natives of United States	1	2	1	1	3	2	4	......	1	1	2	1	1	20
Natives of Ireland	......	......	......	......	......	......	......	1	......	......	......	1	......	2
Can read and write	1	2	1	1	3	2	4	1	1	1	2	2	1	22
Had religious instruction	1	2	1	1	3	2	4	1	1	1	2	2	1	22
Parents living	1	1	1	1	......	......	......	......	1	......	......	1	......	6
Father living	......	......	......	......	......	......	......	......	......	......	......	......	1	1
Mother living	......	1	......	......	......	2	......	......	......	......	......	......	......	3
Parents dead	......	......	......	......	1	......	......	......	......	......	......	......	......	1
Unknown	......	......	......	......	2	......	4	1	......	1	2	1	......	11
Before convicted	......	......	1	1	......	2	2	......	......	......	......	......	1	7
Never before convicted	1	2	......	......	3	......	2	1	1	1	2	2	......	15
Temperate	1	2	......	......	3	2	2	1	1	......	2	1	1	16
Intemperate	......	......	1	1	......	......	2	......	......	1	......	1	......	6

Table E. — (Continued).

ONONDAGA COUNTY.

	Arson.	Assault to kill.	Bigamy.	Burglary.	Burglary & larceny.	Car breaking.	Disorderly house.	Embezzlement.	Forgery.	Fraud.	Grand larceny.	Manslau'r.	Mayhem.	Petit larceny.	Robbery.	Robbery from per.	Petit larc'y, 2d offense.	Rec. stolen good.	Total.
Number reported	2	1	1	3	5	1	1	1	1	2	16	2	1	5	1	1	1	1	46
Males	2	....	1	3	5	1	1	1	1	2	14	2	1	5	1	1	1	1	43
Females	....	1	....	....	....	....	....	....	....	....	2	....	....	....	....	....	....	....	3
From 15 to 21 years of age	....	....	....	2	4	1	....	1	...	....	3	1	1	1	1	1	....	1	17
From 21 to 25 years of age	1	....	....	....	..	....	....	....	....	....	4	....	....	1	....	....	1	....	7
From 25 to 30 years of age	1	....	1	1	....	....	....	....	...	....	4	....	....	....	...	....	...	....	7
From 30 to 40 years of age	....	1	....	....	1	....	....	....	1	2	1	1	....	2	....	....	....	....	9
From 40 to 50 years of age	....	....	....	....	....	....	....	....	....	....	4	....	....	1	....	....	....	....	5
From 50 to 60 years of age	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	1
Married	....	....	1	....	....	....	1	....	1	2	5	1	....	4	....	....	....	....	15
Single	2	1	....	3	5	1	....	1	....	....	11	1	1	1	1	1	1	1	31
Natives of United States	2	....	1	2	5	1	1	1	....	2	8	1	1	4	1	1	....	1	32
Natives of Ireland	....	....	....	....	....	....	....	....	1	....	3	....	...	....	....	....	....	....	4
Natives of Germany	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	1	....	2
Natives of England	....	....	....	....	....	....	....	....	...	...	2	....	....	...	...	....	....	....	2
Natives of Canada	....	1	....	1	....	....	....	...	....	..	3	....	....	1	....	....	....	....	6
Can read and write	2	....	....	3	5	1	1	1	1	2	14	2	1	5	1	1	1	1	42
Cannot read or write	....	1	1	....	....	....	....	....	....	....	2	....	....	....	....	....	....	....	4
Unknown	2	1	1	3	5	1	1	1	1	2	16	2	1	5	1	1	1	1	46
Parents living	1	....	....	....	1	1	....	1	....	..	....	....	1	3	1	1	....	....	10
Father living	1	....	....	....	2	....	....	....	....	....	...	2	....	....	....	....	....	1	6
Mother living	....	1	1	2	2	....	....	....	....	1	...	....	....	1	....	....	1	....	9
Parents dead	....	....	....	1	....	....	1	....	1	1	....	....	....	1	....	....	....	....	5
Unknown	....	....	....	....	....	....	....	....	....	....	16	....	....	....	....	...	....	....	16
Before convicted	1	....	....	1	4	....	....	....	....	....	....	....	1	....	1	1	1	1	11
Never before convicted	1	1	1	2	....	1	1	....	1	2	...	1	....	....	....	....	...	....	11
Unknown	....	....	....	....	1	....	....	1	....	....	16	1	....	5	...	....	....	....	24
Temperate	....	1	1	..	....	...	1	1	....	2	....	....	....	....	1	....	....	....	7
Intemperate	2	. .	....	3	5	1	....	....	1	....	....	2	1	....	....	1	1	1	18
Unknown	....	....	....	....	....	....	....	....	....	....	16	....	....	5	....	....	....	....	21

Table E. — (Continued).

ONTARIO COUNTY.

	Assault to kill.	Arson.	Burglary.	Burglary and larceny.	Carrying concealed weapons.	False pretenses.	Grand larceny.	Larceny from the person.	Nuisance.	Receiving stolen goods.	Robbery.	Violating excise law.	Total.
Number reported	1	2	6	8	1	1	2	1	1	1	1	4	29
Males	1	2	6	8	1	1	2	1	1	1	1	4	29
Under 15 years of age	......	......	3	......	......	......	......	......	......	......	......	......	3
From 15 to 21 years of age	......	......	1	4	......	1	......	......	......	......	......	......	6
From 21 to 25 years of age	......	1	1	2	......	......	1	......	......	......	1	......	6
From 25 to 30 years of age	1	......	......	......	......	......	1	......	......	......	......	......	2
From 30 to 40 years of age	......	1	1	1	......	......	......	......	1	......	......	1	5
From 40 to 50 years of age	......	......	......	1	1	......	......	1	......	1	......	1	5
From 50 to 60 years of age	......	......	......	......	......	......	......	......	......	......	......	1	1
Over 60 years of age	......	......	......	......	......	......	......	......	......	......	......	1	1
Married	1	1	1	1	1	......	2	1	1	1	1	3	14
Single	......	1	5	7	......	1	......	......	......	......	......	1	15
Natives of United States	1	2	6	7	1	1	2	......	1	......	1	3	25
Natives of Ireland	......	......	......	......	......	......	......	1	......	1	......	1	3
Natives of England	......	......	......	1	......	......	......	......	......	......	......	......	1
Can read and write	1	2	6	7	1	1	2	......	1	1	1	4	27
Can read only	......	......	......	1	......	......	......	1	......	......	......	......	2
Had religious instruction	1	2	6	8	1	1	2	1	1	1	1	4	29
Parents living	1	1	1	3	......	1	......	......	1	......	......	......	8
Father living	......	......	......	......	......	......	1	......	......	......	......	......	1
Mother living	......	1	4	3	......	......	1	1	......	......	1	......	11
Parents dead	......	......	1	2	1	......	......	......	......	1	......	4	9
Before convicted	......	......	6	3	1	1	......	1	......	1	1	1	15
Never before convicted	1	2	......	5	......	......	2	......	1	......	......	3	14
Temperate	......	1	4	4	1	1	......	......	......	......	1	1	13
Intemperate	1	1	2	4	......	......	2	1	1	1	......	3	16

Table E. — (Continued).

ORANGE COUNTY.

	Assault.	Assault & battery.	Assault to kill.	Ass'lt with weapon.	Attempt to rape.	Burglary.	Burglary & larceny.	Disorderly house.	Grand larceny.	Petit larceny.	Total.
Number reported	2	3	3	1	3	7	1	1	8	3	32
Males	2	3	3	1	3	7	....	1	7	3	20
Females	....	....	....	....	....	....	1	....	1	....	2
Under 15 years of age	....	...	....	....	....	....	...	....	....	1	1
From 15 to 21 years of age	...	2	....	....	2	4	....	....	3	1	12
From 21 to 25 years of age	1	....	1	1	....	....	1	....	3	....	7
From 25 to 30 years of age	1	....	....	....	....	1	....	....	1	1	4
From 30 to 40 years of age	....	1	....	....	1	1	....	1	1	....	5
From 40 to 50 years of age	....	....	1	....	....	1	....	....	....	....	2
Over 60 years of age	....	....	1	....	....	....	....	....	....	....	1
Married	1	1	1	1	...	....	1	1	1	....	7
Single	1	2	2	....	3	7	....	....	7	3	25
Natives of United States	2	3	2	1	3	6	1	1	5	3	27
Natives of Ireland	....	....	1	....	....	1	....	....	2	....	4
Other foreign countries	...	....	....	. ..	....	....	....	....	1	....	1
Can read and write	2	2	3	1	2	3	....	1	8	3	25
Cannot read or write	....	1	....	....	1	....	1	.. .	....	....	3
Unknown	....	....	....	....	....	4	....	....	....	....	4
Had religious instruction	1	1	3	1	1	....	....	1	4	3	15
Never had religious instruction	1	2	....	....	2	3	1	....	4	....	13
Unknown	....	....	....	....	....	4	....	....	....	....	4
Parents living	....	1	....	....	....	4	1	....	1	3	10
Father living	....	1	1	1	2	....	....	....	....	....	5
Mother living	....	....	....	....	1	1	....	....	3	....	5
Parents dead	1	....	2	....	....	....	....	....	3	....	6
Unknown	1	1	....	....	....	2	....	1	1	....	6
Before convicted	....	....	2	....	....	....	....	....	1	2	5
Never before convicted	2	3	1	1	3	3	1	1	7	1	23
Unknown	....	....	....	....	....	4	....	....	....	....	4
Temperate	....	....	1	....	1	. ..	1	1	1	1	6
Intemperate	2	3	2	1	2	3	....	....	7	2	22
Unknown	....	....	....	....	....	4	....	....	....	....	4

ORLEANS COUNTY.

	Forgery.	Incest.	Manslaughter.	Petit larceny.	Rape.	Total.
Number reported	1	1	1	1	2	6
Males	1	1	1	1	2	6
Under 15 years of age	......	......	......	1	......	1
From 15 to 21 years of age	......	......	1	......	......	1
From 25 to 30 years of age	1	......	......	......	......	1
From 30 to 40 years of age	......	......	......	......	1	1
From 40 to 50 years of age	......	1	......	......	1	2

Table E. — Orleans County — (Continued).

	Forgery.	Incest.	Manslaughter.	Petit larceny.	Rape.	Total.
Married	......	1	1	......	1	3
Single	1	......	......	1	1	3
Natives of United States	1	1	......	1	2	5
Other foreign countries	......	......	1	......	......	1
Can read and write	1	1	1	1	1	5
Cannot read or write	......	......	......	......	1	1
Had religious instruction	1	1	1	1	2	6
Parents living	......	......	......	1	......	1
Father living	......	......	1	......	1	2
Mother living	1	......	......	......	1	2
Parents dead	......	1	......	......	......	1
Before convicted	......	......	......	......	1	1
Never before convicted	1	1	1	1	1	5
Temperate	1	1	... ..	1	2	5
Intemperate	......	......	1	......	......	1

OSWEGO COUNTY.

	Ass'lt & battery.	Arson.	Burgl'y & larc'y.	Bigamy.	Grand larceny.	Malfeasance in office.	Violating excise law.	Total.
Number reported	5	1	3	1	1	1	2	14
Males	5	1	3	1	1	1	2	14
Under 15 years of age	......	......	1	......	......	......	......	1
From 15 to 21 years of age	1	......	1	......	......	......	......	2
From 21 to 25 years of age	2	1	......	......	1	1	......	5
From 25 to 30 years of age	......	. ..	1	1	......	......	......	2
From 30 to 40 years of age	......	......	......	......	......	... ..	1	1
From 40 to 50 years of age	1	......	......	......	......	......	1	2
Over 60 years of age	1	......	......	......	......	......	......	1
Married	3	......	......	1	......	......	2	6
Single	2	1	3	......	1	1	......	8
Natives of United States	4	1	2	1	1	......	1	10
Natives of Ireland	1	......	......	......	......	......	......	1
Natives of Germany	......	......	1	......	......	......	......	1
Natives of Canada	......	......	......	......	.... .	1	......	1
Unknown	......	......	......	......	......	......	1	1
Can read and write	4	......	......	1	......	1	2	8
Cannot read or write	1	1	3	......	1	......	......	6
Had religious instruction	5	......	3	1	......	1	2	12
Never had religious instruction	......	1	......	......	1	......	......	2
Parents living	......	......	1	......	......	......	......	1
Mother living	......	......	2	......	......	......	......	1
Parents dead	......	......	......	......	......	1	......	1
Unknown	5	1	1	1	1	......	2	11
Before convicted	......	......	......	......	1	......	......	1
Never before convicted	......	...	3	... ..	......	1	......	4
Unknown	5	1	......	1	......	......	2	9
Temperate	......	......	......	......	......	1	......	1
Unknown	5	1	3	1	1	......	2	13

Table E.— (Continued).

OTSEGO COUNTY.

	Assault.	Assault to kill.	Assault to ravish.	Bigamy.	Burglary.	Burglary & larceny.	Grand larceny.	Larceny.	Rape.	Robbery.	Robbery & larceny.	Total.
Number reported	2	1	1	2	1	2	1	4	1	1	1	17
Males	2	1	1	...	1	2	1	4	1	1	1	15
Females	....	....	....	2	....	....	....	....	....	....	....	2
From 15 to 21 years of age	....	1	....	....	....	...	....	....	....	1	....	2
From 21 to 25 years of age	2	....	....	1	....	1	1	2	1	....	1	9
From 25 to 30 years of age	....	....	1	1	....	....	....	1	...	....	....	3
From 30 to 40 years of age	....	....	....	....	1	1	....	....	....	....	....	2
From 40 to 50 years of age	....	....	....	....	....	...	....	1	....	....	....	1
Married	....	....	...	2	1	...	....	....	....	....	....	3
Single	1	....	....	....	....	1	....	....	1	1	....	4
Unknown	1	1	1	....	....	1	1	4	....	....	1	10
Natives of United States	2	1	1	2	1	2	1	4	1	1	1	17
Unknown	2	1	1	2	1	2	1	4	1	1	1	17
Unknown	2	1	1	2	1	2	1	4	1	1	1	17
Parents living	....	1	1	1	1	2	1	....	....	1	1	9
Father living	....	....	....	1	....	....	....	....	....	....	....	1
Mother living	....	....	....	....	...	....	....	....	1	....	....	1
Unknown	2	....	....	....	....	....	....	4	....	....	....	6
Never before convicted	....	....	....	....	....	....	1	....	....	....	....	1
Unknown	2	1	1	2	1	2	....	4	1	1	1	16
Unknown	2	1	1	2	1	2	1	4	1	1	1	17

QUEENS COUNTY.

	Assault & battery.	Assault to harm.	Attempt to rape.	Burglary.	Burglary & larceny.	Disturbing oyster beds.	Grand larceny.	Gambling.	Libel.	Perjury.	Petit larceny.	Total.
Number reported	10	2	2	2	1	3	2	4	1	1	1	29
Males	10	2	2	2	1	3	1	4	1	1	1	28
Females	....	....	....	....	....	....	1	....	....	....	....	1
From 15 to 21 years of age	....	1	....	....	1	....	1	....	. ..	....	....	3
From 21 to 25 years of age	1	1	1	....	....	....	1	....	....	....	....	4
From 25 to 30 years of age	4	....	....	2	....	....	....	....	.	....	....	6
From 40 to 50 years of age	3	....	.. .	....	....	1	....	3	1	.	1	9
From 50 to 60 years of age	1	....	1	....	....	2	....	1	....	....	....	5
Over 60 years of age	....	....	....	....	....	....	....	....	....	1	....	1
Unknown	1	....	....	....	....	....	....	....	....	....	....	1
Married	5	....	1	....	....	1	1	....	1	1	....	10
Single	5	2	1	2	1	2	1	4	....	....	1	19
Natives of United States	9	2	1	1	....	3	2	4	....	1	....	23
Natives of Ireland	....	....	....	....	....	....	....	....	....	....	1	1
Natives of Germany	....	....	....	1	1	....	....	....	...	....	....	2
Natives of England	....	....	...	...	....	....	....	....	1	...	....	1
Other foreign countries	1	....	1	...	...	....	....	....	. .	....	....	2
Can read and write	9	1	...	1	....	3	2	4	1	1	....	22

Table E. — Queens County — (Continued.)

	Assault & battery.	Assault to harm.	Attempt to rape.	Burglary.	Burglary & larceny.	Disturbing oyster beds.	Grand larceny.	Gambling.	Libel.	Perjury.	Petit larceny.	Total.
Can read only	....	...	....	...	....	....	....	....	....	....	1	1
Cannot read or write	1	1	2	1	1	....	....	..	...	...	....	6
Had religious instruction	10	....	....	1	....	....	1	....	1	1	....	14
Never had religious instruction	....	2	2	1	1	3	1	4	....	....	1	15
Parents living	2	....	..	2	....	...	2	2	....	....	1	9
Mother living	2	....	1	....	....	...	....	....	1	....	....	4
Parents dead	6	2	1	....	1	3	....	2	....	1	....	16
Before convicted	5	2	1	....	....	2	1	....	....	....	....	11
Never before convicted	5	....	1	2	1	1	1	4	1	1	1	18
Temperate	5	....	1	....	....	1	2	4	1	....	....	14
Intemperate	5	2	1	2	1	2	....	....	....	1	1	15

Table E.— (Continued).

RENSSELAER COUNTY.

	Assault on officer.	Assault to kill.	Assault to rape.	Attempted burglary.	Bigamy.	Burglary.	Embezzlement.	Burglary & larceny.	False pretenses.	Forgery.	Grand larceny.	Manslaughter.	Perjury.	Rape.	Riot.	Total.
Number reported	2	1	1	1	1	12	1	12	1	3	1	1	1	2	1	41
Males	2	1	1	1	1	12	1	12	1	3	1	1	1	2	1	41
Under 15 years of age								1								1
From 15 to 21 years of age	2					3		3								8
From 21 to 25 years of age			1		1	3		2			1		1		1	10
From 25 to 30 years of age		1		1		3		2		1				1		9
From 30 to 40 years of age						3		2				1				6
From 40 to 50 years of age							1	1	1	2						5
From 50 to 60 years of age								1								1
Over 60 years of age														1		1
Married			1	1	1	3	1	2	1			1		2		13
Single	2	1				9		10		3	1		1		1	28
Natives of United States	2	1	1	1	1	11	1	12	1	3	1	1	1	2	1	40
Natives of Canada						1										1
Can read and write	2	1	1	1	1	12	1	12	1	3	1	1	1	2	1	41
Had religious instruction	2	1	1	1	1	12	1	12	1	3	1	1	1	2	1	41
Parents living	1	1		1		5		5		2					1	16
Father living			1			1		1		1						4
Mother living	1					4		3			1			1		10
Parents dead					1	2	1	3	1			1	1	1		11
Before convicted	1		1			6		4	1	3		1				17
Never before convicted	1	1		1	1	6	1	8			1		1	2	1	24
Temperate	1	1		1	1	6	1	8			1		1	2	1	24
Intemperate	1		1			6		4	1	3		1				17

Table E.—(Continued).

RICHMOND COUNTY.

	Burglary and larceny.	Grand larceny.	Total.
Number reported	1	1	2
Males	1	1	2
From 15 to 21 years of age	1	......	1
From 25 to 30 years of age	......	1	1
Married	1	......	1
Single	......	1	1
Natives of United States	1	1	2
Can read and write	1	1	2
Unknown	1	1	2
Parents living	1	1	2
Unknown	1	1	2
Unknown	1	1	2

ST. LAWRENCE COUNTY.

	Petit larceny.	Rape.	Total.
Number reported	2	1	3
Males	2	1	3
From 21 to 25 years of age	1	......	1
From 40 to 50 years of age	1	1	2
Married	2	1	3
Natives of United States	2	1	3
Can read and write	1	......	1
Can read only	......	1	1
Cannot read or write	1	......	1
Unknown	2	1	3
Parents living	1	1	2
Parents dead	1	......	1
Before convicted	1	......	1
Never before convicted	1	1	2
Intemperate	2	1	3

Table E.— (Continued).

SARATOGA COUNTY.

	Assault to kill.	Assault and battery.	Bigamy.	Burglary.	Disorderly house.	Grand larceny.	Petit larceny.	Total.
Number reported	2	1	1	2	2	1	3	12
Males	2	1	1	2	1	1	3	11
Females	......	......	......	......	1	......	......	1
Under 15 years of age	1	......	......	......	......	......	......	1
From 21 to 25 years of age	......	1	......	1	......	......	3	5
From 25 to 30 years of age	......	......	......	......	1	......	......	1
From 30 to 40 years of age	......	......	1	......	......	......	......	1
From 40 to 50 years of age	1	......	......	1	1	......	......	3
From 50 to 60 years of age	......	......	......	......	......	1	......	1
Married	1	......	1	1	1	1	1	6
Single	1	1	....	1	1	......	2	6
Natives of United States	1	1	1	2	1	1	3	10
Natives of Ireland	1	......	......	......	1	......	......	2
Can read and write	1	1	1	2	1	......	3	9
Can read only	1	......	......	......	1	......	......	2
Cannot read or write	......	......	......	......	......	1	......	1
Had religious instruction	2	1	1	2	2	1	3	12
Parents living	1	1	......	......	1	......	2	5
Mother living	......	......	1	1	......	......	......	2
Parents dead	1	......	......	1	1	1	1	5
Before convicted	......	......	......	2	1	1	1	5
Never before convicted	2	1	1	......	1	......	2	7
Temperate	1	1	1	......	......	1	1	5
Intemperate	1	......	......	2	2	......	3	7

SCHENECTADY COUNTY.

	Ass'lt with weapon.	Burglary.	Bigamy.	Burgl'y and larceny.	Grand larceny & receiv'g stolen g'ds.	Receiving stolen goods.	Total.
Number reported	2	1	1	8	1	1	14
Males	2	1	......	8	1	1	13
Females	......	......	1	......	......	......	1
Under 15 years of age	......	......	......	1	......	......	1
From 15 to 21 years of age	1	......	......	5	......	......	6
From 21 to 25 years of age	......	1	......	......	......	......	1
From 25 to 30 years of age	......	......	......	1	......	1	2
From 30 to 40 years of age	1	......	......	1	1	......	3
From 40 to 50 years of age	......	......	1	......	......	......	1
Married	1	......	1	2	......	......	4
Single	1	1	......	6	1	1	10
Natives of United States	2	1	1	7	1	1	13
Natives of Ireland	......	......	......	1	......	......	1
Can read and write	2	1	1	6	1	1	12
Cannot read or write	......	......	......	2	......	......	2

Table E.— Schenectady County —(Continued).

	Ass'lt with weapon.	Burglary.	Bigamy.	Burgl'y & larceny.	Grand larceny & receiv'g stolen g'ds.	Receiving stolen goods.	Total.
Had religious instruction	2	1	1	8	1	1	14
Parents living	......	......	......	4	......	......	4
Father living	2	1	......	1	......	......	4
Mother living	......	......	......	3	......	1	4
Parents dead	......	......	1	......	1	......	2
Before convicted	......	......	......	2	......	......	2
Never before convicted	2	1	1	6	1	1	12
Temperate	......	......	1	5	1	1	8
Intemperate	2	1	......	3	......	......	6

SCHOHARIE COUNTY.

	Grand larceny.	Total.		Grand larceny.	Total.
Number reported	2	2	Unknown	1	1
Males	2	2	Had religious instruction	1	1
From 21 to 25 years of age	1	1	Unknown	1	1
From 30 to 40 years of age	1	1	Parents living	1	1
Single	1	1	Parents dead	1	1
Unknown	1	1	Before convicted	2	2
Natives of United States	2	2	Unknown	2	2
Can read and write	1	1			

SENECA COUNTY.

	Burgl'y & larc'y.	Total.		Burgl'y & larc'y.	Total.
Number reported	2	2	Unknown	2	2
Males	2	2	Had religious instruction	2	2
From 15 to 21 years of age	1	1	Unknown	2	2
From 25 to 30 years of age	1	1	Before convicted	1	1
Unknown	2	2	Never before convicted	1	1
Natives of United States	2	2	Unknown	2	2

Table E. — (Continued).

STEUBEN COUNTY.

	Assault and battery.	Burglary.	Disorderly house.	Forgery.	Grand larceny.	Petit larceny.	Violating excise law.	Total.
Number reported	1	2	2	1	1	6	8	21
Males	1	2	2	1	1	6	8	21
From 21 to 25 years of age	1	.....	.....	.....	.....	1	.....	2
From 30 to 40 years of age	.....	1	.....	.....	1	.....	1	3
From 40 to 50 years of age	.....	.....	.....	1	.....	5	1	7
From 50 to 60 years of age	.....	1	.....	.....	.....	.....	.....	1
Unknown	.....	.....	2	.....	.....	.....	6	8
Married	.....	2	1	.....	1	2	.....	6
Single	1	.....	.....	1	.....	4	.....	6
Unknown	.....	.....	1	.....	.....	.....	8	9
Natives of United States	1	2	.....	1	.....	5	.....	9
Unknown	.....	.....	2	.....	1	1	8	12
Can read and write	1	2	1	1	1	6	.....	12
Unknown	.....	.....	1	.....	.....	.....	8	9
Unknown	1	2	2	1	1	6	8	21
Parents living	1	.....	.....	.....	.....	4	.....	5
Father living	.....	.....	.....	.....	.....	1	.....	1
Unknown	.....	2	2	1	1	1	8	15
Before convicted	.....	.....	.....	.....	.....	1	1	2
Never before convicted	1	.....	.....	.....	.....	5	.....	6
Unknown	.....	2	2	1	1	.....	7	13
Intemperate	.....	1	.....	1	1	5	.....	8
Unknown	1	1	2	.....	.....	1	8	13

TIOGA COUNTY.

	Assault on officer.	Burglary and larceny.	Larceny.	Petit larceny, 2nd offense.	Total.
Number reported	1	1	1	1	4
Males	1	1	1	1	4
From 25 to 30 years of age	1	1	.....	.....	2
From 40 to 50 years of age	.....	.....	1	1	2
Married	.....	.....	1	.....	1
Unknown	1	1	.....	1	3
Natives of United States	.....	.....	1	.....	1
Natives of Ireland	.....	1	.....	.....	1
Unknown	1	.....	.....	1	2
Unknown	1	1	1	1	4
Never had religious instruction	.....	.....	1	.....	1
Unknown	1	1	.....	1	3
Unknown	1	1	1	1	4
Before convicted	.....	1	.....	1	2
Unknown	1	.....	1	.....	2
Intemperate	.....	.....	1	.....	1
Unknown	1	1	.....	1	3

Table E.— (Continued).

TOMPKINS COUNTY.

	Assault to kill.	Burglary and larceny.	Disorderly house.	Grand larceny.	Petit larceny.	Receiving stolen goods.	Violating excise law.	Total.
Number reported	1	1	3	4	2	1	11	23
Males	1	1	2	4	2	1	11	22
Females	....	....	1	....	....	....	....	1
From 15 to 21 years of age	....	....	....	2	....	....	....	2
From 21 to 25 years of age	1	1	....	2	1	....	1	6
From 25 to 30 years of age	....	....	....	...	1	....	2	3
From 40 to 50 years of age	....	....	1	....	..	....	1	2
From 50 to 60 years of age	....	....	1	....	....	....	....	1
Over 60 years of age	....	....	....	....	....	1	....	1
Unknown	...	....	1	....	....	....	7	8
Married	....	....	1	1	1	....	3	6
Single	1	1	....	3	1	1	1	8
Unknown	....	....	2	....	....	..	7	9
Natives of the United States	1	1	1	4	2	1	4	14
Unknown	....	....	2	....	....	....	7	9
Can read and write	1	1	1	4	1	..	4	12
Cannot read or write	....	..	....	....	1	1	....	2
Unknown	....	....	2	....	....	....	7	9
Had religious instruction	1	1	....	4	....	....	4	10
Never had religious instruction	....	....	....	....	2	1	....	3
Unknown	....	....	3	....	....	....	7	10
Parents living	....	....	....	1	....	....	....	1
Father living	1	1	....	1	1	....	1	5
Mother living	. .	....	....	....	1	....	2	3
Parents dead	....	....	....	2	....	1	....	3
Unknown	....	....	3	....	....	....	8	11
Before convicted	....	....	....	1	....	....	....	1
Never before convicted	....	1	. ..	3	....	....	....	4
Unknown	1	....	3	..	2	1	11	18
Temperate	1	1	....	4	.. .	....	3	9
Intemperate	....	....	....	....	2	1	1	4
Unknown	....	....	3	....	....	...	7	10

ULSTER COUNTY.

	Burglary.	Grand larceny.	Total.		Burglary.	Grand larceny.	Total.
Number reported	7	1	8	Natives of United States	5	1	6
Males	7	1	8	Natives of Ireland	1	....	1
From 15 to 21 years of age	2	....	2	Natives of Germany	1	....	1
From 21 to 25 years of age	3	....	3	Can read and write	7	1	8
From 25 to 30 years of age	1	1	2	Had religious instruction	7	1	8
From 50 to 60 years of age	1	....	1	Unknown	7	1	8
Married	1	....	1	Never before convicted	7	1	8
Single	2	1	3	Temperate	3	1	4
Unknown	4	....	4	Unknown	4	....	4

Table E. — (Continued).

WASHINGTON COUNTY.

	Assault.	Arson.	Forgery.	Incest.	Larceny.	Petit larceny.	Robbery.	Total.
Number reported	1	1	1	1	3	1	2	10
Males	1	1	1	1	3	1	2	10
From 15 to 21 years of age	....	....	...	....	1	....	....	1
From 21 to 25 years of age	1	....	....	....	2	1	....	4
From 30 to 40 years of age	....	....	1	....	....	....	2	3
From 40 to 50 years of age	....	....	...	1	....	...	....	1
Over 60 years of age	....	1	....	....	....	....	....	1
Married	....	1	....	1	....	....	1	3
Single	1	....	1	....		1	1	7
Natives of United States	1	....	1	1	3	1	1	8
Natives of Ireland	....	1	....	....	....	....	1	2
Can read and write	....	....	1	1	2	....	1	5
Cannot read or write	1	1	....	. .	1	1	1	5
Unknown	1	1	1	1	3	1	2	10
Parents living	....	....	....	....	2	1	....	3
Father living	....	....	1	....	....	....	....	1
Mother living	1	....	....	1	1	....	1	4
Parents dead	....	1	....	....	....	....	1	2
Before convicted	....	....	1	....	2	....	1	4
Never before convicted	1	1	....	1	1	1	1	6
Temperate	...	....	....	1	....	....	....	1
Intemperate	1	1	1	....	3	1	2	9

WAYNE COUNTY.

	Burglary.	Burglary & larceny.	Murder.	Petit larceny, 2d offense.	Rape.	Receiving stolen goods.	Total.
Number reported	1	4	1	1	1	1	9
Males	1	4	1	1	1	1	9
From 15 to 21 years of age	....	2	....	....	....	....	2
From 21 to 25 years of age	....	1	1	....	1	1	4
From 25 to 30 years of age	....	1	...	....	....	....	1
From 30 to 40 years of age	....	....	....	1	....	....	1
From 40 to 50 years of age	1	...	....	....	....	....	1
Married	....	....	1	1	...	....	2
Single	1	4	....	....	1	1	7
Natives of United States	1	4	1	....	1	....	7
Natives of Ireland	....	....	....	1	....	....	1
Natives of France	....	....	....	....	...	1	1
Can read and write	1	4	...	1	1	1	8
Can read only	....	....	1	....	....	....	1
Had religious instruction	1	4	....	1	1	1	8
Never had religious instruction	....	....	1	....	....	....	1
Parents living	....	1	1	....	....	1	3
Mother living	....	....	....	1	1	....	2
Parents dead	1	3	....	....	....	....	4
Before convicted	....	....	....	1	1	....	2
Never before convicted	1	4	1	. .	....	1	7
Temperate	1	....	....	..	....	...	1
Intemperate	....	1	....	...	....	....	1
Unknown	...	3	1	1	1	1	7

Table E. — (Continued).

WESTCHESTER COUNTY.

	Arson.	Assault and battery.	Assault to harm.	Assault to kill.	Attempt to rape.	Burglary.	Burglary & larceny.	Bigamy.	Defaulting witness.	Fraud.	Grand larceny.	Indecent exposure.	Intoxication.	Libel.	Lar'ny from person.	Murder.	Petit larceny.	Rape.	Violat'g excise law.	Total.
Number reported	2	1	1	3	1	4	1	1	1	1	7	1	1	2	1	3	1	2	4	38
Males	2	1	1	3	1	4	1	1	1	1	7	1	1	2	1	3	1	2	4	38
From 15 to 21 years of age	....	....	....	....	1	....	....	....	....	....	2	....	....	....	....	1	....	....	....	4
From 21 to 25 years of age	....	....	....	2	....	3	....	1	....	....	2	....	....	1	....	....	1	1	....	11
From 25 to 30 years of age	....	1	1	....	....	....	1	....	....	....	1	....	....	1	....	....	....	....	2	7
From 30 to 40 years of age	1	....	....	1	....	....	....	....	....	1	1	1	....	....	....	....	....	....	....	5
From 40 to 50 years of age	....	....	....	....	....	1	....	....	....	....	1	....	1	....	1	....	....	....	2	6
From 50 to 60 years of age	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2	....	1	....	4
Unknown	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	1
Married	1	1	....	2	....	....	....	1	....	1	1	1	1	1	....	....	....	1	2	13
Single	....	....	1	1	1	4	1	....	....	....	6	....	....	1	1	3	1	1	2	23
Unknown	1	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	2
Natives of United States	....	1	1	3	1	4	1	1	....	1	4	....	....	2	....	1	1	2	3	26
Natives of Ireland	....	....	....	....	....	....	....	....	....	....	1	....	1	....	....	....	....	....	1	3
Natives of Germany	1	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	2
Natives of England	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1
Other foreign countries	....	....	....	....	....	....	....	....	....	....	1	1	....	....	1	2	....	....	..	5
Unknown	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	1
Can read and write	2	1	....	3	1	3	1	1	....	1	7	1	....	2	1	3	1	2	4	34
Cannot read or write	....	....	1	....	....	1	....	....	....	....	....	....	1	....	....	....	....	....	....	3
Unknown	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	1
Unknown	2	1	1	3	1	4	1	1	1	1	7	1	1	2	1	3	1	2	4	38
Parents living	1	1	....	2	1	2	1	....	....	....	3	1	....	2	....	....	1	1	2	18
Father living	....	....	....	....	....	1	....	....	....	1	....	....	....	..	....	....	....	....	....	2
Mother living	....	....	....	....	....	1	....	....	....	....	2	....	....	....	....	1	....	....	....	4
Parents dead	1	....	1	1	....	....	....	1	....	....	2	....	1	....	1	2	....	1	2	13

Table E.— Westchester County — (Continued).

	Arson.	Assault and battery.	Assault to harm.	Assault to kill.	Attempt to rape.	Burglary.	Burglary & larceny.	Bigamy.	Defaulting witness.	Fraud.	Grand larceny.	Indecent exposure.	Intoxication.	Libel.	Larc'y from person.	Murder.	Petit larceny.	Rape.	Violating excise law.	Total.
Unknown	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	1
Before convicted	....	....	....	....	....	1	1	1	....	....	....	....	....	....	....	2	....	1	....	6
Never before convicted	2	1	1	3	1	3	....	....	....	1	7	1	1	2	1	1	1	1	4	31
Unknown	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	1
Temperate	....	....	....	1	....	1	1	....	....	1	1	....	....	2	....	....	....	1	4	12
Intemperate	2	1	1	2	1	3	....	1	....	....	6	1	1	....	1	3	1	1	....	25
Unknown	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	1

Table E. — (Continued).

WYOMING COUNTY.

	Grand larceny.	Petit larceny.	Total.		Grand larceny.	Petit larceny.	Total.
Number reported	1	1	2	Unknown	1	1	2
Males	1	1	2	Parents living	1	...	1
From 21 to 25 years of age	1	1	2	Mother living	....	1	1
Unknown	1	1	2	Never before convicted	1	1	2
Natives of United States	1	1	2	Unknown	1	1	2
Unknown	1	1	2				

YATES COUNTY.

	Violating excise law.	Total.		Violating excise law.	Total.
Number reported	1	1	Can read and write	1	1
Males	1	1	Had religious instruction	1	1
From 50 to 60 years of age	1	1	Unknown	1	1
Married	1	1	Unknown	1	1
Unknown	1	1	Unknown	1	1

TABLE F.

Condensation of Abstract E.

	Number reported.	Males.	Females.	Under 15 years of age.	From 15 to 21 years of age.	From 21 to 25 years of age.	From 25 to 30 years of age.	From 30 to 40 years of age.	From 40 to 50 years of age.	From 50 to 60 years of age.	Over 60 years of age.	Unknown.	Married.	Single.	Unknown.	Natives of U. S.	Foreigners.
Assault on officer	4	4	..	....	2	....	1	....	..	1	....	....	1	2	1	2	1
Adulterating milk	19	18	1	...	2	1	....	3	11	2	....	....	9	10	....	10	8
Attempted sodomy	1	1	....	....	...	....	1	....	....	....	....	....	1	....	...	1	....
Assault	18	18	....	....	1	8	6	3	....	....	....	..	7	10	1	15	3
Assault and resisting officer	3	3	....	....	...	....	....	....	....	1	....	2	1	2	....	2	1
Assault and battery	110	104	6	1	20	27	26	12	15	5	2	2	39	70	1	83	27
Attempted rape	14	14	....	....	5	4	1	3	....	1	....	....	5	8	1	12	2
Arson	12	12	....	....	....	3	2	4	..	1	2	....	5	6	1	7	5
Assault to harm	23	23	....	....	7	10	4	....	2	....	....	....	7	16	....	19	4
Assault to kill	30	29	1	1	2	12	3	5	3	1	2	1	15	13	2	23	6
Abortion	1	...	1	....	....	...	...	....	...	....	1	....	1	....	....	..	1
Abduction	3	1	2	...	....	1	.	....	....	1	...	1	3	.	....	2	1
Assault to steal	3	3	....	....	1	1	1	...	....	...	....	....	1	2	....	3	...
Assault with weapon	37	35	2	....	8	7	6	13	3	...	...	....	10	27	....	26	11
Attempted robbery	2	2	....	....	2	....	....	...	....	....	.	....	....	2	...	2	....
Aiding escape	1	1	....	....	...	....	1	...	...	....	....	....	....	1	....	1	...
Attempted burglary	60	60	....	2	22	17	7	10	2	....	....	....	8	52	...	50	10
Attempted grand larceny	23	22	1	....	4	9	3	5	2	....	....	....	7	16	...	19	4
Attempted petit larceny	12	12	....	1	5	4	2	....	....	....	...	....	2	10	....	11	1

Attempted larceny from person	5	5	....	....	3	1	1	...	...	....	....	....	1	4	....	5	..
Attempted forgery	1	1	...	....	....	....	....	1	....	....	....	....	....	1	...	1	...
Attempted extortion	2	2	....	...	....	1	1	....	....	...	....	....	2	...	....	1	1
Attempted assault and battery	1	1	...	....	1	....	....	....	....	....	....	....	....	1	....	....	1
Burglary	353	352	1	13	139	75	60	46	18	2	....	....	52	296	5	299	54
Bigamy	20	15	5	...	....	7	4	8	1	....	...	...	20	....	....	18	2
Burglary and larceny	104	101	3	6	38	30	10	13	4	2	....	....	16	76	12	90	11
Burglary and assault with weapon	1	1	....	....	1	....	...	....	..	....	....	....		1	....	1	....
Burglary and rape	1	1	....	...	1	....	....	...	....	....	....	....	....	1	....	1	....
Burglary and larceny and receiving stolen goods	1	1	....	..	1	....	....	....	....	....	....	....	.	1	...	1	...
Carrying concealed weapons	7	7	....	....	3	....	1	1	2	....	....	....	2	5	....	5	2
Carrying burglars' tools	4	4	....	....	1	....	...	2	1	....	....	....	1	3	...	4	....
Conspiracy	4	4	..	....	...	....	1	2	1	....	....	....	4	....	....	2	2
Disorderly house	38	26	12	....	...	2	4	7	15	4	1	5	25	8	5	24	10
Defaulting witness	1	1	....	....	....	....	....	...	...	....	..	1	...	....	1	....	....
Disturbing oyster beds	3	3	....	...	.	...	...	....	1	2	....	....	2	1	....	3	....
Embezzlement	20	20	....	....	3	4	3	6	3	1	...	...	9	11	....	17	3
Extortion	2	2	....	....	....	....	2	..	....	....	....	....	2	...	....	2	....
Felonious assault	2	2	....	...	....	1	1	...	....	....	....	...	1	1	....	2	...
Forgery	41	39	2	....	2	5	8	10	10	4	1	1	15	25	1	30	10
False pretenses	56	54	2	1	8	11	8	11	7	7	2	1	23	33	....	43	13
Grand larceny	426	385	41	11	116	109	76	79	24	6	5	....	114	303	9	329	95
Gambling	15	15	....	...	....	....	....	6	8	1	....	....	7	8	....	15	....
Grand larceny and escape	1	1	..	....	....	1	....	....	....	...	...	....	1	....	....	1	....
Grand larceny and receiving stolen goods	3	3	....	....	...	....	1	1	....	....	1	....	2	1	....	1	2
Grand larceny from dwelling	1	....	1	....	....	1	..	....	...	...	...	....	1	....	....	....	1
Indecent assault	1	1	....	....	....	....	....	1	....	...	...	....	1	....	....		1
Illegal voting	1	1	....	...	....	...	1	....	...	...	....	....	....	1	...	1	....
Indecent exposure	2	2	....	....	...	...	....	1	1	....	...	....	2	....	..	1	1
Intoxication	1	1	....	....	....	....	...	....	1	....	....	....	1	....	....	....	1
Insane	1	1	....	....	....	....	....	....	1	....	....	....	....	1	....	...	1
Incest	4	3	1	....	1		1	....	2	...	...	....	3	1	....	4	....
Jail-breaking	2	2	..	....	....	1	...	1	....	....	....	....	1	1	....	2	....
Larceny from person	224	215	9	13	86	55	31	25	13	...	1	....	35	189	...	203	21
Libel	3	3	....	....	....	1	1	....	1	....	....	....	2	1	....	2	1
Larceny	8	8	....	....	1	4	1	..	2	....	....	...	1	3	4	8	....
Larceny after felony	3	2	1	..	1	2	....	....	..	....	....	....	....	3	....	2	1
Murder	15	15	...	....	2	3	2	2	2	3	1	....	7	8	...	11	4

Table F.— Condensation of Abstract E. —(Continued).

	Number reported.	Males.	Females.	Under 15 years of age.	From 15 to 21 years of age.	From 21 to 25 years of age.	From 25 to 30 years of age.	From 30 to 49 years of age.	From 40 to 50 years of age.	From 50 to 60 years of age.	Over 60 years of age.	Unknown.	Married.	Single.	Unknown.	Natives of U. S.	Foreigners.
Manslaughter	32	27	5		3	5	7	12	3	2			14	18		16	16
Misdemeanor	1	1						1						1			1
Mayhem	1	1			1									1		1	
Malfeasance in office	1	1				1								1			1
Nuisance	3	3						1	2				2	1		3	
Not stated	2	2				1						1	2			2	
Petit larceny	373	332	41	14	106	85	52	53	43	10	5	5	107	264	2	294	76
Petit larceny, 2d offense	20	20		1	1	8	5	2	3				7	11	2	15	5
Petit larceny after felony	1	1						1						1		1	
Pool selling	1	1						1					1			1	
Policy	1	1									1			1		1	
Practicing medicine unlicensed	7	7					1	4	2				3	4		6	1
Perjury	3	3				1		1			1		1	2		2	1
Resisting officer	2	2										2	2			2	
Robbery after felony	1	1					1							1		1	
Riot	4	4				1						3		3	1	3	
Robbery and larceny	1	1				1									1	1	
Rescuing prisoners	2	2					2						1	1		2	
Robbery	38	37	1		7	13	5	13					12	26		33	5
Rape	16	16			1	3	2	4	3	2	1		7	9		13	3
Receiving stolen goods	34	33	1		9	9	6	5	3		2		5	29		27	7
Rape and incest	1	1							1				1				1
Stoning street car	2	2			1	1								2		2	
Sailors' boarding-house	1	1									1		1				1
Sneakthief	1	1				1								1		1	
Sodomy	1	1				1								1			1

Stoning railroad train	6	6	....	....	2	....	2	2	....	....	....	....	....	6	....	5	1
Unintelligibly abbreviated	1	1	....	....	....	1	....	....	....	....	....	....	....	1	....	1	...
Violating excise law	145	139	6	....	5	6	11	18	34	6	15	50	54	30	61	65	35
Violating lottery laws	13	13	....	....	....	2	2	3	2	3	1	...	7	6	....	8	5
Violating barrel act	2	2	....	....	....	....	....	....	2	....	....	....	2	....	....	...	2
Car breaking	1	1	....	....	1	...	....	....	....	....	....	....	....	1	....	1	....
Seduction	3	3	...	....	....	3	...	....	....	....	...	....	1	2	...	3	....
Winning money on bet	1	1	....	....	....	1	....	...	..	....	....	....	....	1	....	....	1
Fraud	3	3	...	....	...	...	....	3	....	....	....	....	3	....	....	3	...
Total	2479	2333	146	64	626	562	378	405	254	68	46	75	708	1660	111	1930	486

Table F. — Condensation of Abstract E. — (Continued).

	Unknown.	Can read and write.	Can read only.	Cannot read or write.	Unknown.	Parents living.	Father living.	Mother living.	Parents dead.	Unknown.	Temperate.	Intemperate.	Unknown.	Before convicted.	Never before convicted.	Unknown.
Assault on officer	1	4	....	....	.	....	1	1	2	....	3	1	....	....	2	2
Adulterating milk	1	19	...	..	....	3	2	2	12	....	19	....	....	1	18	....
Attempted sodomy	..	....	...	1	....	....	....	....	1	....	....	1	...	1	....	....
Assault	....	17	....	1	....	5	3	2	8	...	12	6	....	2	16	....
Assault and resisting officer	...	3	....	....	....	....	....	....	1	2	1	....	2	....	1	2
Assault and battery	....	101	1	8	....	21	19	22	40	8	75	35	....	17	93	....
Attempted rape	....	9	...	5	...	5	3	2	4	....	....	14	....	7	6	1
Arson	....	11	....	1	....	3	4	1	4	....	8	4	...	3	7	2
Assault to harm	....	23	...	....	...	5	6	7	5	...	17	6	...	5	18	....
Assault to kill	1	30	....	...	....	4	2	5	17	2	12	18	...	12	18	....
Abortion	....	1	...	....	...	....	...	....	1	....	1	....	....	....	1	....
Abduction	....	3	....	....	....	1	....	....	1	1	3	....	....	....	3	....
Assault to steal	...	2	...	1	....	3	....	....	....	....	3	...	....	....	3	....
Assault with weapon	...	35	1	1	....	5	4	6	22	.	21	16	....	5	31	1
Attempted robbery	...	2	....	....	.	2	...	....	....	..	2	....	....	....	....	2
Aiding escape	..	1	...	....	....	....	....	1	...	....	1	....	....	....	....	1
Attempted burglary	....	57	...	3	....	12	11	17	20	....	43	17	....	12	48	.
Attempted grand larceny	...	23	...	....	....	4	7	8	4	....	16	7	....	16	7	...
Attempted petit larceny	....	10	...	2	....	....	3	5	4	....	12	....	....	5	6	1

Attempted larceny from person	....	5	....	....	....	5	....	....	....	....	5	....	....	....	4	1
Attempted forgery	....	1	....	....	....	....	....	....	1	....	1	....	....	....	1	....
Attempted extortion	....	2	....	....	....	....	....	1	1	....	1	1	....	....	2	....
Attempted assault and battery	....	1	....	....	....	1	....	....	....	....	....	1	....	....	1	....
Burglary	....	347	2	4	....	28	43	79	193	10	278	73	2	53	291	9
Bigamy	....	17	....	3	....	2	3	6	8	1	18	2	....	3	17	....
Burglary and larceny	3	100	....	4	....	35	21	7	41	....	93	9	2	10	94	....
Burglary and assault with weapon	....	1	....	....	....	....	1	....	....	....	....	1	....	....	1	....
Burglary and rape	....	1	....	....	....	1	....	....	....	....	....	1	....	1	....	....
Burglary and larceny and receiving stolen goods	....	1	....	....	....	....	....	1	....	....	1	....	....	....	1	....
Carrying concealed weapons	....	7	....	....	....	3	....	....	4	....	7	....	....	2	5	....
Carrying burglars' tools	....	3	....	1	....	....	1	....	3	....	3	1	....	....	4	....
Conspiracy	....	3	1	....	....	....	....	....	4	....	3	1	....	1	3	....
Disorderly house	4	37	....	1	....	5	5	3	25	....	23	15	....	12	26	....
Defaulting witness	1	....	....	....	1	....	....	....	....	1	....	....	1	....	....	1
Disturbing oyster beds	....	3	....	....	....	....	....	....	3	....	3	....	....	....	3	....
Embezzlement	....	20	....	....	....	2	2	4	12	....	20	....	....	5	13	2
Extortion	....	2	....	....	....	2	....	....	....	....	2	....	....	....	2	....
Felonious assault	....	1	....	1	....	1	....	1	....	....	....	2	....	1	1	....
Forgery	1	41	....	....	....	15	3	8	14	1	37	3	1	8	33	....
False pretenses	....	54	....	....	2	14	12	12	16	2	23	12	21	9	44	3
Grand larceny	2	407	2	5	12	73	110	143	100	....	371	55	....	198	216	12
Gambling	....	14	....	1	....	....	....	2	13	....	7	5	3	....	15	....
Grand larceny and escape	....	1	....	....	....	....	1	....	....	....	....	1	....	1	....	....
Grand larceny and receiving stolen goods	....	3	....	....	....	....	....	2	1	....	2	1	....	....	3	....
Grand larceny from dwelling	....	1	....	....	....	1	....	....	....	....	....	....	1	....	1	....
Indecent assault	....	....	....	1	....	....	....	....	....	....	....	1	....	....	1	....
Illegal voting	....	1	....	....	1	1	....	....	....	....	....	1	....	1	....	....
Indecent exposure	....	2	....	....	....	....	....	2	....	....	....	2	....	1	1	....
Intoxication	....	1	....	....	....	....	....	1	....	....	....	1	....	1	....	....
Insane	....	1	....	....	....	....	....	....	1	....	1	....	....	1	....	....
Incest	....	1	....	2	....	1	....	....	3	....	....	4	....	2	2	....
Jail-breaking	....	2	....	....	....	....	....	....	2	....	2	....	....	....	2	....
Larceny from person	....	200	3	20	1	93	42	17	72	....	193	30	2	98	126	....
Libel	....	3	....	....	....	....	1	1	1	....	3	....	....	....	3	....
Larceny	....	8	....	....	....	....	....	2	6	....	5	3	....	3	5	....
Larceny after felony	....	3	....	....	....	3	....	....	....	....	2	1	....	3	....	....
Murder	....	13	....	2	....	5	1	2	6	1	9	4	2	2	13	....

Table F. — Condensation of Abstract E. — (Continued).

	Unknown.	Can read and write.	Can read only.	Cannot read or write.	Unknown.	Parents living.	Father living.	Mother living.	Parents dead.	Unknown.	Temperate.	Intemperate.	Unknown.	Before convicted.	Never before convicted.	Unknown.
Manslaughter	...	30	...	2	...	13	3	5	11	...	25	6	1	12	20	...
Misdemeanor	...	1	...	...	...	...	...	...	1	...	1	...	...	...	1	...
Mayhem	...	1	...	...	...	1	...	...	...	...	...	1	...	1	...	...
Malfeasance in office	...	1	...	...	...	...	...	1	...	...	1	...	...	...	1	...
Nuisance	...	3	...	...	...	...	...	...	3	...	3	...	...	1	2	...
Not stated	...	2	...	...	...	...	1	...	...	1	2	...	...	...	2	...
Petit larceny	3	301	12	60	...	107	78	71	112	5	263	105	5	89	270	14
Petit larceny, 2d offense	...	17	...	3	...	10	3	2	5	...	14	6	...	5	15	...
Petit larceny after felony	...	1	...	...	...	...	...	...	1	...	...	1	...	1	...	...
Pool selling	...	1	...	...	...	...	...	...	1	...	1	...	...	...	1	...
Policy	...	1	...	...	...	...	...	...	1	...	1	...	...	...	1	...
Practicing medicine unlicensed	...	7	...	...	...	1	...	2	3	1	7	...	...	...	7	...
Perjury	...	3	...	...	...	1	...	1	1	...	3	...	...	...	3	...
Resisting officer	...	2	...	...	...	...	...	...	...	2	1	1	...	...	2	...
Robbery after felony	...	...	...	1	...	...	...	1	...	...	...	1	...	1	...	...
Riot	1	4	...	...	...	1	...	...	...	3	2	2	...	...	4	...
Robbery and larceny	...	1	...	...	...	...	1	...	...	...	...	1	...	1	...	...
Rescuing prisoners	...	2	...	...	...	2	...	...	...	...	2	...	...	...	2	...
Robbery	...	35	3	...	...	7	8	6	17	...	25	13	...	12	26	...
Rape	...	12	...	4	...	2	2	2	10	...	2	14	...	9	5	2
Receiving stolen goods	...	34	...	...	...	6	8	4	16	...	29	5	...	6	25	3
Rape and incest	...	...	...	1	...	...	...	...	1	...	...	1	...	1	...	...
Stoning street car	...	2	...	...	...	2	...	...	...	...	2	...	...	...	2	...
Sailors' boarding-house	...	1	...	...	...	...	...	...	1	...	...	1	...	...	1	...
Sneakthief	...	1	...	...	...	...	...	1	...	...	1	...	...	...	1	...
Sodomy	...	...	...	1	...	...	1	...	...	...	...	1	...	...	1	...

Stoning railroad train	....	5	....	1	....	2	....	1	3	....	4	2	....	2	4	...
Unintelligibly abbreviated	....	1	....	....	....	....	1	....	....	....	1	....	....	....	1	....
Violating excise law	45	98	....	...	47	11	7	8	55	64	43	...	102	....	36	109
Violating lottery laws	....	13	....	....	....	2	2	3	6	....	13	....	....	....	13	....
Violating barrel act	....	2	....	....	....	....	....	....	2	....	2	....	....	....	2	....
Car breaking	....	1	....	....	....	1	....	....	....	....	....	1	....	1	....	....
Seduction	...	3	....	....	....	....	2	1	...	....	3	....	....	....	3	....
Winning money on bet	....	1	....	....	...	1	....	....	....	....	1	....	...	....	1	....
Fraud	....	3	....	....	....	....	1	2	....	....	3	....	....	....	3	....
Total	63	2249	25	141	64	534	429	484	926	106	1816	518	145	644	1667	128

TABLE G.

Occupation of persons convicted in Courts of Record in 1882, *as reported by the Sheriffs.*

Occupation.	No. of persons.
Actor	1
Agents	16
Awning maker	1
Bell boys	2
Barbers	8
Bakers	19
Brewer	1
Butchers	32
Boatmen	10
Brokers	17
Billiard	1
Bartenders	17
Blacksmiths	14
Brass-finishers	5
Book-keepers	18
Book-binders	4
Bootblacks	9
Boilermakers	6
Boxmaker	1
Brickmaker	1
Button maker	1
Bricklayers	8
Brushmakers	7
Boarding-house	2
Bagsewer	1
Builders	4
Botanist	1
Carpenters	27
Carmen	5
Clerks	323
Coopers	9
Coachmen	4
Canvassers	4
Caulker	1
Cashboy	1
Copyist	1
Compositors	4
Cooks	9
Coal dealer	1
Cabinetmakers	2
Cigarmakers	27
Chairmakers	2
Cattle dealer	1
Chimney sweeps	2
Collector	1
Cracker factory hand	1
Carpet printer	1
Dogcatcher	1
Doctors	7
Doctress	1
Drivers	98
Dog doctor	1
Druggists	2
Deck-hand	1
Dressmaker	1
Distiller	1
Disorderly house-keepers	3
Engineers	7
Engravers	5
Errand boys	4
Expressmen	5
Electrician	1
Editor	1
Electrotyper	1
Elevator man	1
Florist	1
Furnace builder	1
Felt maker	1
Flax worker	1
Frame maker	1
Factory hand	1
Furniture	1
Farmers	63
Firemen	8
Fringer	1
Gardeners	2
Gas-fitters	3
Glass workers	4
Gamblers	7
Goldbeater	1
Glovemaker	1
Hatters	12
Harnessmakers	2
Housekeepers	53

Table G. — (Continued).

Occupation.	No. of persons.	Occupation.	No. of persons.
Hotelkeepers	18	Paver	1
Hair factory	1	Paper dealers	3
Hostlers	3	Pipemakers	2
Hall boys	2	Patternmaker	1
Iron workers	2	Pilot	1
Icemen	2	Packers	2
Jewelers	3	Plasterer	1
Junk dealers	5	Rag pickers	2
Knitters	2	Railroaders	11
Laborers	469	Runner	1
Lawyers	5	Restaurant keeper	1
Lathers	2	Roofers	3
Landlords	2	Sailors	37
Lithographer	1	Saloon keepers	77
Leather dealer	1	Servants	43
Lumber dealer	1	Silver plater	1
Locksmiths	2	Stone-cutters	13
Longshoremen	5	Shoemakers	34
Laundrymen	6	Speculators	4
Miner	1	School boys	7
Machinists	30	Salesmen	5
Masons	18	Singer	1
Manufacturers	2	Stenographer	1
Merchants	13	Spinners	3
Moulders	17	Seamstresses	6
Musicians	3	Stamper	1
Messengers	3	Sport	1
Marble polisher	1	Tailors	22
Milkmen	11	Teamsters	4
Newsboys	6	Telegraph operators	5
Oystermen	12	Tinsmiths	20
Office boys	2	Teachers	3
Painters	60	Tobacco stripper	1
Peddlers	94	Turners	3
Paper-box maker	1	Tramps	5
Piano maker	1	Upholsterers	3
Photographer	1	Undertaker	1
Plumbers	13	Varnishers	8
Polishers	3	Weavers	6
Policemen	3	Waiters	46
Printers	51	Wood dealer	1
Porters	11	Whitewashers	2
Prostitutes	33	Wire maker	1
Paper factories	5	Not reported	131
Potter	1	No occupations	127
Paperhangers	2		
Pailmaker	1	Total	2479
Pool room	1		

TABLE H.

	Whole number of indictments tried.	Number on which convictions were had.	Number on which defendants were acquitted.	Number on which jury did not agree.	Number of persons convicted on confession.	Number of indictments on which persons were discharged with't trial.
County of Albany.						
Sessions, November, 1881	5	4	1	....	4	....
Oyer and Terminer, December, 1881.	1	1	....	....	....	....
Sessions, January, 1882	6	4	1	1	14	....
Oyer and Terminer, February, 1882.	....	....	....	....	4	....
Sessions, March, 1882	5	5	....	....	10	....
Sessions, June, 1882	3	3	....	....	5	....
Sessions, September, 1882	6	5	1	....	10	1
Oyer and Terminer, October, 1882	....	....	....	....	2	....
County of Allegany.						
Oyer and Terminer, January, 1882	3	3	....	....	....	....
Oyer and Terminer, February, 1882.	1	1	....	....	1	....
Sessions, May, 1882	5	5	....	....	1	3
Oyer and Terminer, June, 1882	1	....	1	....	2	....
County of Broome.						
Sessions, April, 1882	4	3	....	1	16	2
Oyer and Terminer, October, 1882	1	....	1	....	2	....
County of Chemung.						
Sessions, June, 1882	....	....	....	....	5	2
Sessions, October, 1882	2	2	....	....	2	1
County of Cayuga.						
Oyer and Terminer, May, 1882	....	....	....	....	15	....
Sessions, June, 1882	8	4	2	2	8	3
Oyer and Terminer, October, 1882	....	....	....	....	6	....
County of Cortland.						
Sessions, November, 1881	1	....	1	....	1	2
Oyer and Terminer, June, 1882	....	....	....	....	2	4
Sessions, September, 1882	2	3	....	....	1	....
County of Chautauqua.						
Oyer and Terminer, January, 1882	2	1	1	....	1	....
Oyer and Terminer, May, 1882	....	....	....	....	12	4
Sessions, June, 1882	1	1	....	....	3	3
Oyer and Terminer, September, 1882	....	....	....	....	....	1
Sessions, October, 1882	4	2	2	....	1	1
County of Delaware.						
Sessions, August, 1882	2	....	2	....	2	....
Oyer and Terminer, October, 1882	1	1	....	....	3	....

Table H.—(Continued).

	Whole number of indictments tried.	Number on which convictions were had.	Number on which defendants were acquitted.	Number on which jury did not agree.	Number of persons convicted on confession.	Number of indictments on which persons were discharged with't trial.
COUNTY OF DUTCHESS.						
Sessions, December, 1881	2	....	2	....	5	3
Oyer and Terminer, June, 1882.....	....	....	....	....	3	....
Sessions, August, 1882.............	2	2	....	....	4	1
COUNTY OF ESSEX.						
Sessions, June, 1882...............	1	*	*	*	7	....
COUNTY OF ERIE.						
Superior Court, April, 1882	3	3	....	....	9	....
COUNTY OF GENESEE.						
Sessions, April, 1882...............	1	1	....	....	1	....
Oyer and Terminer, June, 1882.....	....	....	....	....	2	....
COUNTY OF HERKIMER.						
Sessions, December, 1881..........	14	11	2	1	....	8
Sessions, May, 1882................	11	10	1	....	....	3
COUNTY OF JEFFERSON.						
Oyer and Terminer, December, 1881.	....	....	....	....	5	2
Sessions, May, 1882	4	1	3	....	1	1
Sessions, September, 1882..........	2	2	....	....	....	1
COUNTY OF KINGS.						
Sessions, March, 1882..............	9	8	1	....	13	1
Sessions, April, 1882...............	1	....	1	....	....	....
Sessions, May, 1882................	7	3	4	....	37	....
Sessions, June, 1882...............	4	....	4	....	2	12
Sessions, July, 1882................	6	5	1	....	19	2
Sessions, September, 1882..........	15	12	3	....	14	2
Sessions, October, 1882	5	5	....	....	12	6
COUNTY OF MADISON.						
Sessions, May, 1882................	4	2	1	1	4	2
Sessions, September, 1882	....	....	....	....	1	2
COUNTY OF MONROE.						
Sessions, January, 1882............	6	6	....	....	7	5
Sessions, March, 1882..............	7	6	1	....	6	2
Oyer and Terminer, March, 1882....	....	....	....	....	4	....
Oyer and Terminer, June, 1882......	....	....	....	....	8	....

* Not stated.

Table H. — (Continued).

	Whole number of indictments tried.	Number on which convictions were had.	Number on which defendants were acquitted.	Number on which jury did not agree.	Number of persons convicted on confession.	Number of indictments on which persons were discharged with't trial.
COUNTY OF NEW YORK.						
Oyer and Terminer, November, 1881	2	2	....	....	3	7
General Sessions, November, 1881..	55	28	27	....	111	21
General Sessions, December, 1881..	65	40	25	....	148	87
General Sessions, January, 1882....	65	35	30	....	146	25
General Sessions, February, 1882...	48	25	23	....	102	12
Oyer and Terminer, February, 1882.	1	....	1	....	1	14
General Sessions, March, 1882......	55	22	33	....	136	11
General Sessions, April, 1882.......	59	29	30	....	134	22
General Sessions, May, 1882........	72	38	34	....	106	46
General Sessions, June, 1882........	74	37	37	....	103	29
General Sessions, July, 1882........	37	19	18	....	72	17
General Sessions, August, 1882.....	26	9	17	....	111	19
General Sessions, September, 1882..	68	35	33	....	133	22
General Sessions, October, 1882....	77	40	37	....	154	49
COUNTY OF ONEIDA.						
Sessions, April, 1882...............	3	2	1	....	5	11
Oyer and Terminer, May, 1882......	....	....	....	....	3	1
COUNTY OF ONONDAGA.						
Oyer and Terminer, March, 1882....	1	....	1	....	4	1
Oyer and Terminer, May, 1882......	....	....	....	....	5	....
Sessions, June, 1882...............	10	7	3	....	3	4
COUNTY OF ONTARIO.						
Oyer and Terminer, May, 1882......	....	....	....	....	7	....
Sessions, June, 1882...............	2	1	1	....	1	4
Oyer and Terminer, October, 1882..	....	....	....	....	3	1
COUNTY OF ORLEANS.						
Oyer and Terminer, June, 1882.....	2	2	....	....	1	....
COUNTY OF OTSEGO.						
Sessions, June, 1882...............	7	2	4	1	6	....
Oyer and Terminer, September, 1882	1	....	1	....	3	....
COUNTY OF QUEENS.						
Oyer and Terminer, June, 1882.....	....	....	....	....	1	....
Sessions, July, 1882...............	7	5	2	....	2	....
COUNTY OF RENSSELAER.						
Oyer and Terminer, May, 1882......	....	....	....	....	6	....
Sessions, June, 1882...............	5	4	1	....	7	....
Oyer and Terminer, September, 1882	....	....	....	....	5	....

Table H.— (Continued).

	Whole number of indictments tried.	Number on which convictions were had.	Number on which defendants were acquitted.	Number on which jury did not agree.	Number of persons convicted on confession.	Number of indictments on which persons were discharged with't trial.
COUNTY OF SARATOGA.						
Sessions, July, 1882	3	2	1	....	10	8
COUNTY OF STEUBEN.						
Sessions, June, 1882	5	5	....	....	....	....
COUNTY OF SCHUYLER.						
Sessions, October, 1882	1	1	....	....	1	3
COUNTY OF ST. LAWRENCE.						
Sessions, August, 1882	1	1	....	....	8	6
COUNTY OF SENECA.						
Sessions, May, 1882	....	....	....	....	7	....
COUNTY OF TIOGA.						
Sessions, February, 1882	7	7	....	....	....	4
Oyer and Terminer, April, 1882	1	1	....	....	....	....
Sessions, September, 1882	4	4	....	....	4	....
COUNTY OF TOMPKINS.						
Oyer and Terminer, November, 1881	1	....	1	....	2	....
Sessions, February, 1882	7	6	....	1	7	....
Oyer and Terminer, March, 1882	....	....	....	....	2	....
Sessions, June, 1882	5	2	2	1	6	....
Sessions, October, 1882	8	3	5	....	1	....
COUNTY OF ULSTER.						
Oyer and Terminer, November, 1881	5	5	....	....	6	....
Sessions, December, 1881	1	1	....	....	....	*
Oyer and Terminer	2	2	....	....	....	....
Sessions	....	....	....	....	3	....
COUNTY OF WAYNE.						
Sessions, April, 1882	5	5	....	....	....	....
Oyer and Terminer, June, 1882	1	1	....	....	....	....
COUNTY OF WESTCHESTER.						
Sessions, May, 1882	10	8	2	....	....	2
Oyer and Terminer, June, 1882	1	1	....	....	....	....
Sessions, September, 1882	11	9	2	....	....	2

* Not stated.

Table H. — (Continued).

	Whole number of indictments tried.	Number on which convictions were had.	Number on which defendants were acquitted.	Number on which jury did not agree.	Number of persons convicted on confession.	Number of indictments on which persons were discharged with't trial.
County of Wyoming.						
Sessions, June, 1882	3	3	......	....	1	....
Oyer and Terminer, September, 1882	....	....	....	....	2	....
Sessions, October, 1882	1	....	1	....	3	1
County of Yates.						
Sessions, January, 1882	....	....	....	....	....	1
Sessions, June, 1882	2	1	1	....	2	....

TABLE I.

Summary of Table H, exhibiting the results of the returns from each county.

COUNTIES.	Whole number of indictments tried.	Number of convictions had on trial.	Number on which defendants were acquitted.	Number on which jury did not agree.	Number of persons convicted on confession.	Number of indictments on which persons were discharged without trial.
Albany	26	22	3	1	49	1
Allegany	10	9	1	....	4	3
Broome	5	3	1	1	18	2
Chemung	2	2	....	....	7	3
Cayuga	8	4	2	2	29	3
Cortland	3	2	1	....	4	6
Chautauqua	7	4	3	....	17	9
Delaware	3	1	2	....	5	....
Dutchess	4	2	2	....	12	4
Essex	1	*	*	*	7	....
Erie	3	3	....	....	9	....
Genesee	1	1	....	....	3	....
Herkimer	25	21	3	1	....	11
Jefferson	6	3	3	....	6	4
Kings	47	33	14	....	97	23
Madison	4	2	1	1	5	4
Monroe	13	12	1	....	25	7
New York	704	359	345	....	1,460	381
Oneida	3	2	1	....	8	12
Onondaga	11	7	4	....	12	5
Ontario	2	1	1	....	11	5
Orleans	2	2	....	....	1	....
Otsego	8	2	5	1	9	....
Queens	7	5	2	....	3	....
Rensselaer	5	4	1	....	18	....
Saratoga	3	2	1	....	10	8
Steuben	5	5	....	....	....	....
Schuyler	1	1	....	....	1	3
St. Lawrence	1	1	....	......	8	6
Seneca	....	....	....	....	....	7
Tioga	12	12	....	....	4	4
Tompkins	21	11	8	2	18	....
Ulster	8	8	....	....	9	....
Wayne	6	6	....	....	....	....
Westchester	32	26	6	....	....	6
Wyoming	4	3	1	....	6	1
Yates	2	1	1	....	2	1
Total	1,005	582	413	9	1,877	519

* Not stated.

K.

Giving an abstract of the returns by County Clerks of certificates of convictions in Courts of Special Sessions filed in the respective County Clerks' offices during the year.

COUNTY OF ALBANY.

No. of convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1881.				
1	December.	1	......	Assault and battery	Fine.
1	"	1	......	" "	Suspended.
2	"	2	......	" on officer	Fine.
1	"	1	......	Breach of peace	Suspended.
1	"	1	......	Keeping pool table on Sunday	Fine.
1	"	1	......	Petit larceny	Penitentiary.
1	"	1	......	" "	House of refuge.
	1882.				
1	January.	1	......	Assault and battery	Penitentiary.
1	"	1	......	Malicious mischief	Fine.
1	"	1	......	Violating excise law	Fine.
2	February.	2	......	Assault and battery	Fine.
1	"	1	......	Petit larceny	Penitentiary.
1	"	1	......	Violating city ordinance	Fine.
1	June.	1	......	Assault and battery	Penitentiary.
1	"	......	1	Breach of peace	Fine.
1	"	1	......	Petit larceny	Penitentiary.
1	July.	1	......	Assault and battery	Fine.
1	"	1	......	Assault on officer	Fine.
1	"	1	......	Violating city ordinance	Fine.
1	August.	1	......	Assault on officer	Fine.
1	"	1	......	Breach of peace	Fine.
1	"	1	......	Cruelty to animals	Fine.
4	"	3	1	Petit larceny	Penitentiary.
2	"	2	......	" "	House of refuge.
1	"	1	......	" "	Fine.
4	September.	4	......	Assault	Fine.
2	"	2	......	" and battery	Fine.
1	"	1	......	Petit larceny	Fine.
1	"	1	......	Selling liquor without licence.	Fine.

COUNTY OF ALLEGANY.

No. of convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1881.				
1	December.	1	......	Assault and battery	Jail.
12	"	12	......	Intoxication	Fine.
1	"	1	......	Petit larceny	Fine.
1	"	1	......	" "	Jail.
	1882.				
1	March.	1	......	Defrauding innkeeper	Jail.
3	"	3	......	Drunk and disorderly	Fine.
4	"	4	......	Intoxication	Fine.
1	"	1	......	Petit larceny	Jail.
1	"	1	......	Tramp	Penitentiary.
1	April.	1	......	Assault and battery	Fine.
6	"	6	......	Disorderly conduct	Fine.
11	"	11	......	Drunk and disorderly	Fine.
10	"	10	......	Intoxication	Fine.
2	"	......	2	Keeping bawdy house	Fine.
4	"	4	......	Keeping gambling house	Fine.
16	"	......	16	Prostitution	Fine.
1	"	1	......	Petit larceny	Jail.
1	"	1	......	Profanity	Fine.
1	"	1	......	Malicious mischief	Fine.

Table K.— County of Allegany — (Continued).

No. of convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1882.				
6	May.	6	......	Drunk and disorderly	Fine.
4	"	4	......	Intoxication	Fine.
1	"	......	1	Keeping bawdy house	Fine.
1	"	1	......	Keeping disorderly house	Fine.
11	"	......	11	Prostitution	Fine.
1	"	1	......	Petit larceny	Jail.
1	June.	1	......	Assault and battery	Jail.
1	"	1	......	Intoxication	Fine.
1	"	1	......	Peddling without license	Fine.
1	"	1	......	Petit larceny	Fine.

COUNTY OF BROOME.

No. of convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1881.				
1	November.	1	......	Disorderly person	Jail.
1	"	1	......	Intoxication	Fine.
1	"	1	......	Petit larceny	Jail.
4	"	4	......	Tramp	Penitentiary.
2	December.	2	......	Disorderly person	Jail.
1	"	1	......	Intoxication	Fine.
4	"	4	......	Misdemeanor	Fine.
	1882.				
4	January.	4	......	Disorderly person	Fine.
3	"	3	......	" "	Jail.
1	"	1	......	" "	Penitentiary.
3	"	3	......	Intoxication	Jail.
1	"	1	......	"	Fine.
2	"	2	......	Petit larceny	Penitentiary.
1	"	1	......	"	House of refuge.
6	"	6	......	Tramp	Penitentiary.
3	"	3	......	Vagrancy	Poor-house.
1	February.	1	......	Assault and battery	Fine.
2	"	2	......	Disorderly person	Penitentiary.
1	"	1	......	" "	Jail.
4	"	4	......	Intoxication	Jail.
1	"	1	......	"	Fine.
2	"	2	......	"	Penitentiary.
1	"	1	......	Petit larceny	Fine.
4	"	4	......	Trespass on railroad	Fine.
6	"	6	......	Tramp	Penitentiary.
1	March.	1	......	Assault and battery	Fine.
3	"	3	......	Disorderly person	Fine.
1	"	......	1	" "	Penitentiary.
2	"	2	......	" "	Jail.
1	"	1	......	Intoxication	Jail.
1	"	1	......	Keeping gambling room	Fine.
1	"	1	......	Tramp	Penitentiary.
1	"	1	......	Violating city ordinance	Fine.
1	April.	1	......	Assault and battery	Fine.
4	"	4	......	Disorderly person	Fine.
3	"	3	......	Intoxication	Fine.
2	"	2	......	"	Jail.
2	"	2	......	Trespass on railroad	Fine.
5	"	5	......	Tramp	Penitentiary.
1	"	......	1	Vagrancy	Poor-house.
3	June.	1	2	Disorderly person	Penitentiary.
2	"	2	......	" "	Fine.
2	"	2	......	Intoxication	Fine.
1	"	......	1	Petit larceny	House of refuge.

Table K.— (Continued).

COUNTY OF CAYUGA.

No. of Convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1881.				
12	November.	12	......	Breach of peace	Fine.
1	"	1	......	Interfering with officer	Fine.
67	"	65	2	Intoxication	Fine.
1	"	1	......	Petit larceny	Fine.
1	"	1	......	Violating city ordinance	Fine.
1	December.	1	......	Assault and battery	Fine.
3	"	3	......	Breach of peace	Fine.
58	"	58	......	Intoxication	Fine.
1	"	1	......	Petit larceny	Fine.
1	"	1	......	"	Penitentiary.
3	"	2	1	Violating excise law	Fine.
	1882.				
4	January.	4	......	Breach of peace	Fine.
1	"	1	......	Carrying concealed weapons	Fine.
1	"	......	1	Drunk and disorderly	Fine.
66	"	64	2	Intoxication	Fine.
1	"	1	......	Violating city ordinance	Fine.
8	February.	6	2	Breach of peace	Fine.
5	"	......	5	Inmate house ill fame	Fine.
1	"	......	1	Keeping house ill fame	Fine.
60	"	57	3	Intoxication	Fine.
2	"	2	......	Petit larceny	Fine.
1	"	......	1	"	Penitentiary.
2	"	......	2	Violating excise law	Fine.
5	March.	5	......	Breach of peace	Fine.
1	"	1	......	Cruelty to animals	Fine.
17	"	3	14	Inmate house ill fame	Fine.
1	"	......	1	Keeping house ill fame	Fine.
58	"	57	1	Intoxication	Fine.
1	"	1	......	Malicious mischief	Fine.
4	"	4	......	Petit larceny	Fine.
1	"	1	......	Violating excise law	Fine.
1	April.	1	......	Assault and battery	Fine.
1	"	1	......	" "	Jail.
10	"	8	2	Breach of peace	Fine.
1	"	1	......	Disorderly person	Fine.
101	"	99	2	Intoxication	Fine.
6	"	6	......	Inmate house ill fame	Fine.
2	"	......	2	Keeping house ill fame	Fine.
2	May.	2	......	Breach of peace	Fine.
46	"	44	2	Intoxication	Fine.
2	June.	2	......	Assault and battery	Fine.
2	"	2	......	Breach of peace	Fine.
72	"	71	1	Intoxication	Fine.
5	July.	3	2	Breach of peace	Fine.
1	"	1	......	Disorderly person	Not stated.
3	"	3	......	"	Fine.
70	"	66	4	Intoxication	Fine.
1	"	1	......	Misdemeanor	Fine.
1	"	1	......	Petit larceny	House of refuge.
1	"	......	1	Vagrancy	"
1	"	1	......	Violating city ordinance	Fine.
1	August.	1	......	Assault and battery	Fine.
16	"	15	1	Breach of peace	Fine.
3	"	3	......	Cruelty to animals	Fine.
1	"	1	......	Disorderly person	Jail.
126	"	126	......	Intoxication	Fine.
2	"	2	......	Petit larceny	Fine.
1	"	......	1	Violating excise law	Fine.
2	"	2	......	Vagrancy	Poor-house.

Table K. — County of Cayuga — (Continued).

No. of Convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1882.				
1	September.	1	......	Assault and battery	House of refuge.
4	"	4	......	Breach of peace	Fine.
1	"	1	......	Carrying liquor into jail	Fine.
52	"	50	2	Intoxication	Fine.
1	"	......	1	Inmate house ill fame	Fine.
1	"	......	1	Keeping house ill fame	Fine.
1	"	1	......	Petit larceny	Fine.
1	"	......	1	Violating excise law	Fine.
4	October.	4	.....	Breach of peace	Fine.
40	"	38	2	Intoxication	Fine.
2	"	1	1	Violating excise law	Fine.

COUNTY OF CHAUTAUQUA.

No. of Convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1881.				
1	November..	1	......	Disorderly person	Penitentiary.
4	"	4	......	Intoxication	Fine.
3	December..	3	......	"	Fine.
2	"	2	......	Petit larceny	Fine.
2	"	2	......	Vagrancy	Not stated.
5	"	5	......	"	Jail.
	1882.				
1	January....	1	......	Assault and battery	Fine.
4	"	4	......	Intoxication	Fine.
1	"	1	......	Petit larceny	Fine.
1	"	1	......	Violating excise law	Fine.
1	"	1	.....	Violating village ordinance	Fine.
3	"	3	......	Vagrancy	Penitentiary.
1	February...	1	......	Intoxication	Penitentiary.
5	"	5	......	"	Fine.
1	"	1	......	Misdemeanor	Fine.
1	"	1	......	Petit larceny	Fine.
1	"	1	......	Vagrancy	Penitentiary.
1	March	1	......	Assault and battery	Penitentiary.
5	"	5	......	" "	Fine.
1	"	1	......	Disorderly person	Fine.
4	"	4	......	Intoxication	Fine.
1	"	1	......	Petit larceny	Work-house.
2	"	2	......	Vagrancy	Not stated.
1	"	1	......	"	House of refuge.
1	"	1	......	"	Penitentiary.
1	"	1	......	Violating excise law	Fine.
4	April.	4	......	Intoxication	Fine.
1	"	1	......	Vagrancy	Not stated.
1	"	1	......	"	Work-house.
1	"	1	......	"	Penitentiary.
1	"	1	......	Violating excise law	Fine.
1	May	1	......	Assault and battery	Fine.
1	"	1	......	Drunk and disorderly	Work-house.
1	"	1	......	Disorderly person	Penitentiary.
3	"	2	1	Intoxication	Fine.
1	"	1	......	Trespass on railroad	Work-house.
1	"	1	......	Vagrancy	Penitentiary.
2	June	2	......	Assault and battery	Fine.
1	"	1	......	" "	Jail.
1	"	1	......	Disorderly person	Penitentiary.
1	"	1	......	Intoxication	Jail.
1	"	1	......	Petit larceny	House of refuge.
1	"	1	......	"	Fine.

Table K.— County of Chautauqua — (Continued).

No. of convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1882.				
2	June.	2	......	Profanity	Fine.
1	"	1	......	Violating excise law	Fine.
1	"	1	......	Vagrancy	Not stated.
1	July.	1	......	Assault and battery	Penitentiary.
1	"	1	......	" "	Fine.
1	"	1	......	Breach of peace	Fine.
1	"	1	......	Defrauding inn-keeper	Penitentiary.
3	"	3	......	Intoxication.	Penitentiary.
4	"	4	......	"	Fine.
1	"	1	......	Petit larceny	Fine.
2	"	2	......	"	Work-house.
1	"	1	......	"	House of refuge.
1	"	1	......	Vagrancy	Jail.
2	August.	2	......	Assault and battery	Penitentiary.
1	"	1	......	" "	Fine.
1	"	1	......	Drunk and disorderly	Fine.
3	"	3	......	Disorderly person	Penitentiary.
5	"	5	......	Intoxication.	Fine.
1	"	1	......	Petit larceny	Fine.
1	"	1	......	"	Jail.
1	"	1	......	"	Penitentiary.
1	"	1	......	"	R. C. Reformatory.
4	"	4	......	Trespass on railroad	Jail.
1	"	1	......	Vagrancy	Jail.
1	"	1	......	"	Not stated.
1	September.	1	......	Assault	Penitentiary.
2	"	2	......	" and battery	Penitentiary.
1	"	1	......	" "	Fine.
1	"	1	......	Disorderly person	Penitentiary.
1	"	1	......	Exposure of person	Penitentiary.
2	"	2	......	Intoxication	Fine.
1	"	1	......	Malicious mischief.	Work-house.
1	"	1	......	Petit larceny	Work-house.

COUNTY OF CHEMUNG.

	1881.				
1	November.	1	......	Drunk and disorderly	Fine
48	"	46	2	Intoxication	Fine.
9	"	6	3	"	Jail.
2	"	1	1	"	Penitentiary.
1	"	1	......	Petit larceny	Penitentiary.
3	"	......	3	Prostitution	House of refuge.
1	"	1	......	Vagrancy	Penitentiary.
3	December.	3	......	Assault and battery	Fine.
68	"	66	2	Intoxication	Fine.
10	"	10	......	"	Jail.
3	"	2	1	"	Penitentiary.
1	"	......	1	Petit larceny	Penitentiary.
1	"	1	......	"	House of refuge.
1	"	1	......	Trespass on railroad	Fine.
	1882.				
1	January.	1	......	Disorderly person	Not stated.
32	"	30	2	Intoxication	Fine.
10	"	6	4	"	Jail.
3	"	2	1	"	Penitentiary.
2	"	2	......	Petit larceny	Penitentiary.
1	"	1	......	"	Jail.
3	"	3	......	Vagrancy	Not stated.

Table K. — *County of Chemung* — (Continued).

No. of convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
1	1882. February.	1	......	Assault and battery..........	Fine.
1	"	......	1	Disorderly person............	Penitentiary.
1	"	1	......	Exposure of person..........	Penitentiary.
1	"	1	......	Interfering with officer.......	Penitentiary.
4	"	2	2	Intoxication..................	Penitentiary.
7	"	6	1	"	Jail.
75	"	73	2	"	Fine.
5	"	5	......	Petit larceny................	Penitentiary.
1	"	1	......	"	House of refuge.
1	"	......	1	Vagrancy..................	Penitentiary.
2	"	1	1	"	Not stated.
5	March.	4	1	Intoxication................	Penitentiary.
10	"	8	2	"	Jail.
61	"	61	......	"	Fine.
1	"	1	......	Petit larceny................	House of refuge.
2	"	2	......	"	Jail.
1	"	......	1	Vagrancy..................	Penitentiary.
1	April.	1	......	Defrauding innkeeper........	Jail.
7	"	4	3	Intoxication................	Jail.
49	"	44	5	"	Fine.
10	"	4	6	"	Penitentiary.
1	"	1	......	"	Poor house.
2	"	2	......	Petit larceny................	House of refuge.
6	May.	3	3	Intoxication................	Penitentiary.
107	"	103	4	"	Fine.
4	"	4	......	"	Jail.
1	"	1	......	Petit larceny................	Jail.
6	"	5	1	"	Penitentiary.
1	June.	1	......	Assault and battery....	Jail.
1	"	1	......	Disorderly person............	Jail.
9	"	5	4	Intoxication................	Jail.
82	"	80	2	"	Fine.
4	"	3	1	"	Penitentiary.
1	"	1	......	"	Poor-house.
1	"	1	......	Petit larceny..	House of refuge.
1	July.	1	......	Assault and battery....... ..	Penitentiary.
1	"	1	......	Disorderly conduct..........	Penitentiary.
1	"	1	......	Exposure of person..........	House of refuge.
1	"	......	1	Intoxication................	Poor-house.
8	"	6	2	"	Jail.
62	"	61	1	"	Fine.
4	"	4	......	"	Penitentiary.
2	"	2	......	Vagrancy..................	Not stated.
1	August.	1	......	Disorderly person............	Penitentiary.
2	"	2	......	Intoxication................	Penitentiary.
6	"	6	......	"	Jail.
57	"	56	1	"	Fine.
2	"	2	......	Petit larceny................	Penitentiary.
8	September.	7	1	Intoxication................	Penitentiary.
3	"	2	1	"	Jail.
58	"	56	2	"	Fine.
1	"	1	......	Tramp..........	Penitentiary.

Table K.— (Continued).

COUNTY OF CORTLAND.

No. of convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1881.				
6	November.	6	.....	Intoxication..................	Fine.
7	December.	7	......	"	Fine.
	1882.				
1	January.	1	......	Tramp.........................	Penitentiary.
2	"	2	......	Vagrancy.....................	Not stated.
3	February.	3	......	Intoxication..................	Fine.
5	March.	5	......	"	Fine.
1	"	1	......	Petit larceny................	Jail.
1	April.	1	......	Assault and battery..........	Fine.
6	"	6	......	Intoxication..................	Fine.
1	"	1	......	Petit larceny.........	Penitentiary.
7	May.	7	......	Intoxication.	Fine.
6	June.	6	......	"	Fine.
1	July.	1	......	Assault and battery	Jail.
1	"	1	......	" "	Fine.
4	"	4	......	Intoxication..................	Fine.
1	August.	1	......	Assault and battery	Fine.
17	"	17	......	Intoxication..................	Fine.
2	"	2	......	Petit larceny.................	Penitentiary.
1	"	1	......	"	Jail.
1	September.	1	......	Assault and battery..........	Fine.
1	"	1	......	Intoxication..................	Fine.
3	"	3	......	Petit larceny.................	Jail.
1	"	1	......	Tramp..................	Penitentiary.
1	"	1	......	Vagrancy.....................	Not stated.
4	October.	4	......	Intoxication..................	Fine.
1	"	1	......	Trespass on railroad..........	Fine.
1	"	1	......	Tramp.........................	Penitentiary.

COUNTY OF DELAWARE.

	1882.				
1	March.	1	......	Disorderly person......... ..	Not stated.
2	April.	2	......	Intoxication	Fine.
1	May.	1	......	Assault and battery..........	Fine.
1	"	......	1	Petit larceny	House of refuge.
1	July.	1	......	Assault and battery...........	Fine.
1	"	1	......	Petit larceny.................	Fine.
2	"	2	......	"	Jail.
1	"	1	......	"	Penitentiary and fine.
1	August.	1	......	Assault and battery..........	Fine.
2	"	1	1	Intoxication..................	Fine.
1	"	1	......	Petit larceny.................	Fine.
1	September.	1	......	Vagrancy...........	Not stated.

COUNTY OF DUTCHESS.

	1881.				
1	November.	1	......	Assault and battery..........	Fine.
5	"	5	......	Drunk and disorderly........	Jail.
2	"	2	......	" "	Penitentiary.
1	"	.....	1	Intoxication............	Penitentiary.
29	"	26	3	"	Fine.
1	"	1	......	Petit larceny.................	Fine.
4	"	4	......	"	Penitentiary.
1	"	1	......	Violating excise law..........	Jail.
2	"	2	......	Vagrancy.....................	Jail.
1	"	......	1	"	Not stated.
1	December.	1	......	Assault and battery..........	Fine.
1	"	1	......	" "	Penitentiary.
1	"	1	......	Breach of peace..............	Penitentiary.
1	"	1	......	" "	Jail.

Table K. — County of Dutchess — (Continued).

No. of convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1881.				
25	December.	23	2	Intoxication	Fine.
1	"	1	......	Malicious mischief	Jail.
3	"	3	......	" "	Penitentiary.
1	"	1	.....	Exposure of person	Penitentiary.
2	"	2	......	Petit larceny	House of refuge.
3	"	3	......	"	Penitentiary.
1	"	1	......	"	Fine.
1	"	1	......	"	Jail.
1	"	1	......	Vagrancy	Jail.
2	"	2	......	"	Not stated
	1882.				
1	January.	1	......	Assault and battery	Penitentiary.
1	"	1	......	" "	Jail.
1	"	1	......	Cruelty to animals	Fine.
2	"	2	......	Drunk and disorderly	Jail.
18	"	14	4	Intoxication	Fine.
3	"	3	......	"	Penitentiary.
1	"	1	......	Petit larceny	House of refuge.
4	"	4	......	Vagrancy	Penitentiary.
1	"	1	......	"	Poor-house.
1	"	1	......	"	Jail.
1	February.	1	.....	Assault and battery	Penitentiary.
2	"	2	......	Drunk and disorderly	Penitentiary.
1	"	......	1	Disorderly person	Jail.
1	"	1	......	Disorderly child	House of refuge.
30	"	30	......	Intoxication	Fine.
1	"	1	......	Petit larceny	House of refuge.
1	"	1	......	Vagrancy	Penitentiary.
1	"	1	......	"	Poor-house.
1	"	......	1	"	Not stated.
1	March.	1	.....	Assault and battery	Fine.
1	"	1	......	" "	Penitentiary.
1	"	1	......	Breach of peace	Penitentiary.
42	"	41	1	Intoxication	Fine.
1	"	1	......	Petit larceny	Penitentiary.
1	April.	1	......	Breach of peace	Penitentiary.
1	"	1	......	Drunk and disorderly	Jail.
1	"	1	......	" "	Fine.
43	"	41	2	Intoxication	Fine.
3	"	3	......	Petit larceny	Penitentiary.
1	May.	1	......	Disorderly person	Jail.
1	"	......	1	Drunk and disorderly	Jail.
1	"	1	.....	Intoxication	Jail.
42	"	42	......	"	Fine.
1	"	1	......	Petit larceny	Jail.
1	"	1	......	"	Penitentiary.
1	June.	1	......	Assault and battery	Jail.
1	"	1	......	" "	Fine.
1	"	1	......	Breach of peace	Penitentiary.
1	"	1	......	Exposure of person	Fine.
42	"	42	......	Intoxication	Fine.
1	"	......	1	Petit larceny	House of refuge.
1	"	1	......	Violating Sunday laws	Fine.
1	"	1	......	Vagrancy	Penitentiary.
1	"	1	......	"	Jail.
2	July.	2	......	Assault and battery	Fine.
2	"	2	......	Breach of peace	Jail.
4	"	......	4	Disorderly person	Not stated.
37	"	35	2	Intoxication	Fine.
4	August.	2	2	Assault and battery	Fine.
2	"	2	......	" "	Jail.
1	"	1	......	Breach of peace	Jail.

Table K. — County of Dutchess — (Continued).

No. of convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1882.				
1	August.	1	......	Breach of peace	Penitentiary.
1	"	1	......	Drunk and disorderly	Jail.
1	"	1	......	Intoxication	Penitentiary.
35	"	34	1	"	Fine.
2	"	1	1	Petit larceny	Penitentiary.
1	"	1	......	Violating excise law	Fine.
1	September.	1	......	Assault and battery	Fine.
1	"	1	......	" "	Jail.
41	"	41	......	Intoxication	Fine.
1	"	1	......	Petit larceny	Penitentiary.
1	"	1	......	"	Jail.
2	"	......	2	Prostitution	Penitentiary.
1	"	1	......	Tramp	Penitentiary.
2	"	2	......	Vagrancy	House of refuge.

COUNTY OF ERIE.

No. of convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1881.				
2	November.	2	......	Assault	Fine.
31	"	30	1	" and battery	Fine.
2	"	2	......	" "	Work-house.
11	"	10	1	" "	Suspended.
1	"	1	......	Cruelty to animals	Suspended.
1	"	1	......	" children	Work-house.
85	"	67	18	Disorderly conduct	Fine.
1	"	1	......	" person	Jail.
120	"	88	32	Intoxication	Fine.
1	"	1	......	Interfering with officer	Fine.
3	"	3	......	Malicious mischief	Fine.
1	"	1	......	"	Suspended.
4	"	4	......	Petit larceny	House of refuge.
9	"	8	1	"	Fine.
6	"	6	......	"	Work-house.
6	"	6	......	Vagrancy	Work-house.
3	"	3	......	"	Poor-house.
6	"	6	......	"	Jail.
1	"	1	......	"	Ingleside home.
34	December.	30	4	Assault and battery	Fine.
8	"	7	1	" "	Suspended.
4	"	4	......	" "	Work-house.
2	"	2	......	Cruelty to animals	Fine.
70	"	50	20	Disorderly conduct	Fine.
1	"	1	......	Embezzlement	Fine.
190	"	159	31	Intoxication	Fine.
3	"	3	......	"	Suspended.
3	"	3	......	Malicious mischief	Suspended.
3	"	3	......	"	Fine.
2	"	2	......	Malicious trespass	Fine.
2	"	2	......	Obstructing street railway	Fine.
37	"	34	3	Petit larceny	Fine.
20	"	18	2	"	Work-house.
17	"	17	......	Vagrancy	Work-house.
2	"	......	2	"	Asylum of refuge.
1	"	......	1	"	Ingleside home.
1	"	1	......	"	Poor-house.
6	"	6	......	"	Jail.
47	"	12	35	"	Not stated.
1	"	1	......	Violating excise law	Fine.

Table K.— County of Erie — (Continued).

No. of convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1882.				
20	January.	20	......	Assault and battery	Fine.
10	"	9	1	" "	Suspended.
1	"	1	......	" "	Penitentiary.
1	"	1	......	Cruelty to animals.	Fine.
62	"	46	16	Disorderly conduct	Fine.
91	"	78	13	Intoxication	Fine.
2	"	1	1	"	Suspended.
1	"	1	......	Malicious mischief	Work-house.
2	"	2	......	"	Fine.
44	"	41	3	Petit larceny	Fine.
9	"	9	......	"	Work-house.
5	"	5	......	"	House of refuge.
3	"	1	2	"	R. C. protectory.
57	"	56	1	Vagrancy	Not stated.
1	"	1	......	"	Work-house.
7	"	7	......	"	Jail.
2	"	......	2	"	Ingleside home.
7	February.	7	......	Assault and battery	Fine.
6	"	5	1	" "	Work-house.
6	"	5	1	" "	Suspended.
3	"	......	3	Destitution.	Orphan asylum.
1	"	1	......	Embezzlement.	Work-house.
2	"	2	......	"	Fine.
1	"	......	1	Habitual drunkard.	Asylum of refuge.
1	"	1	......	Indecent exposure	Work-house.
104	"	68	36	Intoxication.	Fine.
16	"	12	4	Petit larceny	Fine.
8	"	6	2	"	Work-house.
5	"	4	1	"	House of refuge.
14	"	13	1	Vagrancy	Work-house.
2	"	2	......	"	Poor-house.
39	"	39	......	"	Not stated.
29	March.	26	3	Assault and battery	Fine.
1	"	1	......	" "	Work-house.
3	"	2	1	" "	Suspended.
2	"	2	......	Cruelty to animals	Fine.
69	"	51	18	Disorderly conduct	Fine.
22	"	22	......	Destitution	St. Joseph's asylum.
1	"	1	......	Disturbing religious meeting.	Suspended.
1	"	1	......	Embezzlement.	Fine.
158	"	130	28	Intoxication	Fine.
5	"	5	......	"	Suspended.
3	"	3	......	Indecent exposure	Fine.
4	"	4	......	Malicious mischief	Fine.
4	"	3	1	"	Suspended.
2	"	2	......	Keeping gambling room	Fine.
26	"	25	1	Petit larceny	Fine.
16	"	13	3	"	Work-house.
6	"	6	......	"	R. C. protectory.
3	"	2	1	"	House of refuge.
1	"	1	......	Selling obscene prints	Fine.
25	"	25	......	Vagrancy	Not stated.
20	"	20	......	"	Work-house.
5	"	......	5	"	Ingleside home.
2	"	2	......	"	Penitentiary.
3	"	3	......	Violating park ordinance.	Fine.
9	April.	9	......	Disorderly conduct	Fine.
23	"	17	6	Intoxication	Fine.
1	"	1	......	Petit larceny	Fine.

Table E. — County of Erie — (Continued).

No. of convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1882.				
25	May.	23	2	Assault and battery	Fine.
4	“	3	1	“ “	Work-house.
12	“	10	2	“ “	Suspended.
2	“	2	......	Cruelty to animals	Fine.
163	“	130	33	Disorderly conduct	Fine.
3	“	......	3	Destitution	St. Vincent's asylum.
290	“	240	50	Intoxication	Fine.
7	“	6	1	“	Suspended.
3	“	2	1	Malicious mischief	Suspended.
2	“	2	......	“	Fine.
2	“	2	......	Keeping gambling room	Fine.
34	“	27	7	Petit larceny	Fine.
4	“	4	......	“	House of refuge.
10	“	8	2	“	Work-house.
1	“	1	......	“	R. C. protectory.
1	“	1	......	Violating park ordinance	Suspended.
10	“	10	......	“ “	Fine.
14	“	14	......	Vagrancy	Work-house.
4	“	4	......	“	Poor-house.
1	“	1	......	“	Ingleside home.
34	“	34	......	“	Not stated.
5	June.	5	......	Assault and battery	Fine.
5	“	5	......	Cruelty to animals	Fine.
136	“	118	18	Disorderly conduct	Fine.
170	“	140	30	Intoxication	Fine.
2	“	2	......	Petit larceny	Work-house.
9	“	9	......	Vagrancy	Work-house.
2	“	2	......	“	Poor-house.
31	“	31	......	“	Not stated.
48	July.	43	5	Assault and battery	Fine.
181	“	128	53	Disorderly conduct	Fine.
235	“	200	35	Intoxication	Fine.
3	“	2	1	Malicious mischief	Fine.
1	“	1	......	“	Suspended.
18	“	15	3	Petit larceny	Fine.
1	“	1	......	“	Penitentiary.
8	“	5	3	“	Work-house.
4	“	3	1	“	House of refuge.
1	“	1	......	“	R. C. protectory.
1	“	......	1	Prostitution	Ingleside home.
1	“	......	1	“	Asylum of refuge.
1	“	1	......	Selling lottery tickets	Fine.
1	“	1	......	Truancy	R. C. protectory.
1	“	......	1	Vagrancy	Asylum of refuge.
20	“	18	2	“	Work-house.
45	“	42	3	“	Not stated.
2	“	2	......	Violating park ordinance.	Suspended.
9	August.	8	1	Assault and battery	Suspended.
1	“	1	......	“ “	Penitentiary.
5	“	5	......	“ “	Work-house.
27	“	27	......	“ “	Fine.
1	“	1	......	Cruelty to animals	Fine.
1	“	1	......	“ children	Work-house.
94	“	94	......	Disorderly conduct	Fine.
2	“	2	......	“ person	Jail.
1	“	1	......	Embezzlement	Fine.
214	“	214	......	Intoxication	Fine.
4	“	4	......	“	Suspended.
21	“	18	3	Petit larceny	Fine.
1	“	1	......	“	House of refuge.

Table K.— County of Erie — (Continued).

No. of convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1882.				
19	August.	17	2	Petit larceny	Work-house.
1	"	1	......	Truancy	R. C. protectory.
1	"	......	1	Vagrancy	Orphan asylum.
18	"	18	......	"	Work-house.
1	"	1	......	"	Poor-house.
2	"	......	2	"	Ingleside home.
37	"	37	......	"	Not stated.
3	"	3	......	Violating park ordinance	Suspended.
1	"	......	1	" excise law	Fine.
38	September.	34	4	Assault and battery	Fine.
17	"	17	......	" "	Suspended.
4	"	3	1	" "	Work-house.
2	"	2	......	Cruelty to animals.	Fine.
147	"	115	32	Disorderly conduct	Fine.
230	"	208	22	Intoxication	Fine.
2	"	2	......	"	Suspended.
2	"	2	......	Malicious mischief	Suspended.
1	"	1	......	"	Work-house.
2	"	1	1	Petit larceny	Fine.
26	"	23	3	"	Fine.
15	"	15	......	"	Work-house.
3	"	2	1	"	House of refuge.
1	"	......	1	"	R. C. protectory.
10	"	10	......	Vagrancy	Work-house.
1	"	......	1	"	Ingleside home.
38	"	38	......	"	Not stated.
4	"	1	3	Violating excise law	Fine.
22	October.	20	2	Assault and battery	Fine.
3	"	3	......	" "	Work-house.
1	"	1	......	" "	House of refuge.
13	"	12	1	" "	Suspended.
1	"	1	......	Disorderly conduct	Penitentiary.
80	"	68	12	"	Fine.
1	"	......	1	Habitual drunkard	Asylum of refuge.
298	"	257	41	Intoxication	Fine.
5	"	5	......	"	Suspended.
1	"	......	1	"	Asylum of refuge.
1	"	1	......	Indecent exposure.	Fine.
1	"	1	......	Malicious mischief.	Fine.
1	"	1	......	"	Work-house.
1	"	1	......	"	Suspended.
1	"	1	......	Malicious prosecution	Fine.
19	"	14	5	Petit larceny	Fine.
20	"	20	......	"	Work-house.
1	"	1	......	"	House of refuge.
2	"	2	......	"	R. C. protectory.
1	"	1	......	Truancy	Suspended.
1	"	1	......	Vagrancy	House of refuge.
7	"	7	......	"	Work-house.
1	"	1	......	"	Poor-house.
1	"	1	......	"	Orphan asylum.
33	"	29	4	"	Not stated.

Table K.— (Continued)

COUNTY OF ESSEX.

No. of convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1881.				
2	November.	2	......	Intoxication	Fine.
2	“	2	......	Petit larceny	Fine.
1	December.	1	......	Disorderly conduct	Jail.
1	“	1	......	Intoxication	Fine.
	1882.				
1	March.	1	......	Assault and battery	Fine.
1	“	1	......	Disorderly conduct	Fine and imprisonment.
2	“	2	......	Intoxication	Fine.
4	April.	4	......	“	Fine.
1	May.	1	......	Assault and battery	Fine.
1	“	1	......	Intoxication	Fine.
1	“	1	......	Violating excise law	Fine.
2	June.	2	......	Assault and battery	Fine.
1	“	1	......	Vagrancy	Poor-house.
1	July.	1	......	Assault and battery	Fine.
2	August.	2	......	Drunk and disorderly	Jail.
1	“	1	......	Intoxication	Fine.
1	“	1	......	Vagrancy	Jail.

COUNTY OF FRANKLIN.

No. of convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1881.				
1	November.	1	......	Assault and battery	Fine.
1	“	1	......	Cruelty to animals	Fine.
1	“	1	......	Drunk and disorderly	Jail.
1	“	1	......	Intoxication	Fine.
1	“	1	......	Petit larceny	Fine.
1	December.	1	......	Assault and battery	Fine.
1	“	1	......	“ “	Suspended.
1	“	1	......	Vagrancy	Jail.
	1882.				
1	January.	1	......	Assault and battery	Suspended.
2	“	2	......	“ “	Fine.
3	“	3	......	Intoxication	Fine.
1	February.	1	......	Affray	Fine.
3	“	3	......	Assault and battery	Fine.
6	“	6	......	Intoxication	Fine.
1	March.	1	......	Assault and battery	Fine.
1	“	1	......	Intoxication	Fine.
1	“	1	......	Petit larceny	Fine.
1	April.	1	......	Assault and battery	Fine.
5	“	5	......	Intoxication	Fine.
1	May.	1	......	Assault	Jail.
2	“	2	......	“ and battery	Fine.
2	“	2	......	Intoxication	Fine.
3	“	3	......	Petit larceny	Fine.
1	“	1	......	“	Jail.
2	June.	2	......	Affray	Fine.
2	“	2	......	Assault and battery	Fine.
4	“	4	......	Intoxication	Fine.
1	“	1	......	Threats	Bonds.
2	July.	2	......	Assault and battery	Fine.
6	“	6	......	Intoxication	Fine.
1	“	1	......	Violating excise law	Fine.
20	August.	20	......	Intoxication	Fine.
3	“	3	......	Vagrancy	Not stated
1	September.	1	......	Assault and battery	Jail.
1	“	1	......	Intoxication	Jail.
6	“	6	......	“	Fine.
1	October.	1	......	Assault and battery	Fine.
1	“	1	......	Intoxication	Fine.

Table K. — (Continued).

COUNTY OF GENESEE.

No. of Convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1881.				
2	November.	2	......	Assault and battery	Fine.
1	December.	1	......	“ “	Penitentiary.
1	“	1	......	Drunk and disorderly	Fine.
6	“	6	......	Intoxication	Fine.
	1882.				
8	January.	8	......	“	Fine.
2	“	2	......	Petit larceny	Penitentiary.
2	February.	2	......	Assault and battery	Fine.
2	“	2	......	Intoxication	Fine.
1	“	1	......	Petit larceny	House of refuge.
1	March.	1	......	Assault and battery	Jail.
1	“	1	......	Drunk and disorderly	Fine.
1	“	1	......	Disorderly person	Penitentiary.
4	“	4	......	Intoxication	Fine.
1	April.	1	......	Assault and battery	Fine.
2	“	2	......	Intoxication	Fine.
3	“	3	......	Petit larceny	Fine.
9	May.	9	......	Intoxication	Fine.
1	June.	1	......	Assault and battery	Fine.
1	“	1	......	“ “	Jail.
1	“	1	......	Intoxication	Fine.
1	“	1	......	Threats	Jail.
1	July.	1	......	Assault and battery	Penitentiary.
1	“	1	......	“ “	Fine.
4	“	4	......	Intoxication	Fine.
1	“	1	......	Indecent exposure	Jail.
1	“	1	......	Petit larceny	Jail.
1	“	1	......	Vagrancy	Penitentiary.
1	August.	1	......	Assault and battery	Jail.
1	“	1	......	“ “	Fine.
9	“	9	......	Intoxication	Fine.
1	“	1	......	Trespass on railroad	Fine.
4	“	4	......	Vagrancy	Penitentiary.
1	“	1	......	“	Jail.
5	September.	5	......	Intoxication	Fine.
1	“	1	......	Trespass on railroad	Fine.
1	“	1	......	Threats	Bonds.
1	October.	1	......	Affray	Fine.
1	“	1	......	Assault and battery	Fine.
11	“	11	......	Intoxication	Fine.
4	“	4	......	Trespass on railroad	Fine.

COUNTY OF HERKIMER.

No. of Convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1881.				
6	November.	6	......	Intoxication	Fine.
1	“	1	......	Petit larceny	Jail.
7	December.	7	......	Intoxication	Fine.
1	“	1	......	Petit larceny	Jail.
	1882.				
1	January.	1	......	Assault and battery	Fine.
1	“	1	......	Intoxication	Fine.
1	“	1	......	Violating excise law	Fine.
38	“	38	......	Vagrancy	Not stated.
30	February.	30	......	“	Not stated.
2	March.	2	......	Intoxication	Fine.
20	“	20	......	Vagrancy	Not stated.

Table K. — County of Herkimer — (Continued).

No. of Convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1882.				
1	April.	1	......	Assault and battery..........	Fine.
1	“	1	......	Defrauding inn keeper	Fine.
6	“	6	......	Intoxication	Fine.
1	“	1	......	Petit larceny	House of refuge.
1	“	1	......	Tramp	Penitentiary.
21	“	21	......	Vagrancy	Jail.
10	May.	10	......	Intoxication	Fine.
2	“	2	......	Vagrancy	Penitentiary.
2	“	2	......	“	Not stated.
1	June.	1	......	Assault and battery..........	Penitentiary.
1	“	1	......	Embezzlement	Fine.
5	“	5	......	Intoxication	Fine.
1	“	1	......	Keeping disorderly house	Fine.
1	“	1	......	Malicious mischief	Fine.
1	“	1	......	Petit larceny	Penitentiary.
1	July.	1	......	Assault and battery..........	Penitentiary.
1	“	1	......	“ “	House of refuge.
2	“	2	......	“ “	Jail.
1	“	1	......	“ “	Fine.
6	“	6	......	Intoxication	Fine.
1	“	1	......	Malicious mischief	Fine.
1	“	1	......	Petit larceny	Penitentiary.
3	“	3	......	Tramp	Penitentiary.
1	“	1	......	Trespass on railroad	Fine.
2	“	2	......	Vagrancy	Poor-house.
1	“	1	......	“	Jail.
1	August.	1	......	Assault and battery..	Penitentiary.
3	“	2	1	“ “	Fine.
2	“	2	......	Drunk and disorderly	Fine.
11	“	11	......	Intoxication	Fine.
1	“	1	......	“	Suspended.
1	“	1	......	Petit larceny	House of refuge.
1	“	1	......	“	Penitentiary.
1	“	1	......	Vagrancy	Jail.
16	September.	16	......	Intoxication	Fine.
1	“	1	......	Petit larceny................	Fine.
6	October.	6	......	Intoxication	Fine.
2	“	2	......	Petit larceny	Penitentiary.

COUNTY OF JEFFERSON.

No. of Convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1881.				
1	November.	1	......	Assault	Jail.
3	“	3	......	“ and battery..........	Fine.
3	“	3	. ....	Drunk and disorderly	Fine.
1	“	1	......	“ “	Penitentiary.
2	“	2	......	Petit larceny................	Fine.
1	December.	1	......	Assault and battery..........	Penitentiary.
6	“	6	......	Intoxication.................	Fine.
1	“	1	......	Petit larceny................	Fine.
	1882.				
8	January.	7	1	Intoxication.................	Fine.
1	“	1	......	“	Jail.
2	“	2	......	Petit larceny................	Fine.
1	February.	1	......	Assault and battery	Jail.
1	“	1	......	False pretenses	Penitentiary.
7	“	7	......	Intoxication.................	Fine.
2	“	2	......	Petit larceny................	House of refuge.
3	March.	3	......	Assault and battery	Fine.
2	“	2	......	Drunk and disorderly.........	Fine.
4	“	4	......	“ “	Jail.
4	“	4	......	Intoxication	Fine.
1	“	1	......	Petit larceny................	Fine.
1	“	1	......	“	Jail.

Table K. — County of Jefferson — (Continued).

No. of convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1882.				
1	April.	1	......	Assault and battery	Fine.
9	"	9	......	Intoxication..................	Fine.
1	May.	1	......	Assault and battery..........	Fine.
1	"	1	......	Drunk and disorderly.........	Jail.
2	"	......	2	Disorderly person............	Fine.
6	"	6	......	Intoxication..................	Fine.
1	"	1	......	"	Penitentiary.
2	"	2	......	Petit larceny.................	Fine.
2	June.	2	......	Assault and battery..........	Fine.
2	"	2	......	Disorderly person............	Fine.
1	"	1	......	Drunk and disorderly	Penitentiary.
12	"	12	......	Intoxication..................	Fine.
1	"	1	......	Petit larceny.................	Jail.
4	July.	4	......	Assault and battery..........	Fine.
2	"	2	......	Drunk and disorderly	Penitentiary.
8	"	8	......	Intoxication........	Fine.
1	"	1	......	Petit larceny.................	Fine.
1	August.	1	......	Assault and battery..........	Fine.
9	"	9	......	Drunk and disorderly	Fine.
2	"	2	......	" "	Penitentiary.
10	"	10	......	Intoxication..................	Fine.
5	"	5	......	Vagrancy.....................	Not stated.
1	September.	1	......	Assault and battery..........	Fine.
1	"	1	......	" "	Jail.
1	"	1	......	Petit larceny	Fine.
14	"	14	......	Intoxication..................	Fine.
2	"	2	......	Violating excise law..........	Fine.
2	October.	2	......	Assault and battery.....	Fine.
1	"	1	......	Cruelty to animals...........	Fine.
1	"	1	......	Drunk and disorderly........	Jail.
2	"	2	......	" "	Penitentiary.
1	"	1	......	Inmate house ill fame	Fine.
5	"	5	......	Intoxication..................	Fine.
1	"	1	......	Petit larceny.................	Fine.
1	"	......	1	Vagrancy.....................	House of refuge.

COUNTY OF KINGS.

No. of convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1881.				
1	November.	1	......	Assault......................	Fine.
2	"	2	......	Abandonment................	Suspended.
2	"	2	......	"	Bonded.
1	"	1	......	"	Jail.
25	"	23	2	Assault and battery..........	Fine.
3	"	3	......	" "	Penitentiary.
39	"	35	4	" "	Sentence suspended.
7	"	7	......	" "	Bonded.
3	"	3	......	" "	Jail.
1	"	1	......	Affray...	Jail.
4	"	4	......	"	Sentence suspended.
7	"	7	......	"	Fine.
1	"	1	......	Bastardy	Bonded.
3	"	3	......	Constructive larceny.........	Suspended.
1	"	1	......	" "	Fine.
7	"	7	......	Cruelty to animals...........	Fine.
1	"	1	......	" "	Suspended.
2	"	2	......	Committing nuisance.........	Suspended.
2	"	2	......	Cheating	Suspended.
10	"	10	......	Disorderly persons...........	Suspended.
3	"	1	2	"	Bonded.
1	"	1	......	"	Truant home.

Table K.— County of Kings — (Continued).

No. of convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1881.				
2	November.	1	1	Fornication	Suspended.
2	"	2	......	Habitual drunkard	Suspended.
10	"	8	2	"	Penitentiary.
7	"	6	1	"	Inebriates' home.
2	"	1	1	"	Jail.
1	"	......	1	Intoxication	Jail.
1	"	1	.....	"	House of refuge.
1	"	1	......	"	Bonded.
209	"	153	56	"	Fine.
466	"	401	65	"	Suspended.
12	"	10	2	Malicious mischief	Suspended.
1	"	1	......	"	Jail.
2	"	2	......	Petit larceny	Jail.
4	"	4	......	"	Fine.
16	"	14	2	"	Penitentiary.
8	"	8	......	"	House of refuge.
11	"	10	1	"	Suspended.
1	"	1	......	Peddling unlicensed	Suspended.
9	"	9	......	Truancy	Truant home.
1	"	1	......	Vagrancy	Truant home.
1	"	1	.....	"	Fine.
10	"	7	3	"	Suspended.
23	"	13	10	"	Jail.
5	"	......	5	"	House of Good Shepherd
20	"	14	6	"	Penitentiary.
2	"	2	......	"	House of refuge.
52	"	50	2	Violating city ordinance	Suspended.
17	"	17	......	" "	Fine.
19	"	17	2	Violating health laws	Suspended.
2	"	2	.....	" "	Fine.
20	December.	18	2	Assault and battery	Fine.
35	"	29	6	" "	Suspended.
1	"	1	......	" "	Jail.
2	"	2	......	" "	Penitentiary.
4	"	2	2	" "	Bonded.
1	"	1	......	Affray	Jail.
2	"	2	......	"	Suspended.
1	"	1	.....	Carrying concealed weapons.	Fine.
3	"	3	.....	Cruelty to animals	Suspended.
3	"	3	......	" "	Fine.
9	"	8	1	Disorderly person	Suspended.
1	"	......	1	" "	Bonded.
2	"	2	......	Driving without license	Suspended.
1	"	1	......	Habitual drunkard	Suspended.
3	"	1	2	"	Penitentiary.
1	"	1	......	"	Bonded.
1	"	1	......	"	Inebriate home.
1	"	......	1	"	House of Good Shepherd
128	"	82	46	Intoxication	Fine.
403	"	344	59	"	Suspended.
2	"	2	......	Malicious mischief	Suspended.
5	"	5	......	Peddling without license	Suspended.
3	"	3	......	" "	Fine.
9	"	9	......	Petit larceny	Fine.
2	"	2	......	"	Jail.
12	"	10	2	"	Penitentiary.
1	"	1	......	"	House of refuge.
10	"	8	2	"	Suspended.
16	"	15	1	Vagrancy	Suspended.
1	"	1	.....	"	Poor-house.
3	"	3	......	"	House of refuge.
2	"	2	......	"	Truant home.

Table K.— County of Kings — (Continued).

No. of convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
7	1881. December.	5	2	Vagrancy	Penitentiary.
31	"	24	7	"	Jail.
24	"	17	7	Violating sanitary code	Suspended.
38	"	38	......	Violating city ordinance	Suspended.
11	"	10	1	" "	Fine.
3	1882 January.	3	......	Assault and battery	Penitentiary.
1	"	1	......	" "	Jail.
6	"	6	......	" "	Fine.
14	"	12	2	" "	Suspended.
9	"	8	1	" "	Bonded.
2	"	2	......	Bastardy	Bonded.
2	"	2	......	Cruelty to animals	Fine.
4	"	3	1	Disorderly conduct	Bonded.
1	"	......	1	"	Suspended.
5	"	4	1	Habitual drunkards	Suspended.
2	"	2	......	"	Jail.
1	"	......	1	"	House of Good Shepherd
5	"	4	1	"	Inebriate home.
3	"	1	2	"	Penitentiary.
118	"	83	35	Intoxication	Fine.
297	"	258	39	"	Suspended.
6	"	5	1	Malicious mischief	Suspended.
1	"	1	......	"	Fine.
5	"	5	......	Petit larceny	Jail.
5	"	4	1	"	House of refuge.
14	"	11	3	"	Penitentiary.
7	"	5	2	"	Suspended.
1	"	1	......	Threats	Bonded.
2	"	2	......	Truants	Truant home.
1	"	1	......	Vrgrancy	Truant home.
112	"	76	36	"	Jail.
3	"	......	3	"	House of Good Shepherd
6	"	4	2	"	Penitentiary.
9	"	9	......	"	House of refuge.
16	"	11	5	"	Suspended.
10	"	10	......	Violating city ordinance	Fine.
113	"	110	3	" "	Suspended.
10	February.	10	......	Assault and battery	Suspended.
5	"	5	......	" "	Jail.
5	"	4	1	" "	Bonded.
8	"	8	......	" "	Penitentiary.
17	"	12	5	" "	Fine.
1	"	1	......	Cruelty to children	Suspended.
3	"	3	......	Cruelty to animals	Fine.
1	"	......	1	Disorderly persons	Suspended.
1	"	1	......	"	House of refuge.
1	"	1	......	"	Penitentiary.
2	"	......	2	Habitual drunkards	House of Good Shepherd
1	"	1	......	"	Inebriate home.
1	"	1	......	"	Suspended.
64	"	52	12	Intoxication	Suspended.
55	"	44	11	"	Fine.
3	"	3	......	Malicious mischief	Fine.
1	"	1	......	"	Suspended.
10	"	5	5	Petit larceny	Jail.
12	"	10	2	"	Penitentiary.
1	"	1	......	"	House of refuge.
2	"	2	......	"	Suspended.
1	"	1	......	Threats	Bonded.
3	"	3	......	Truancy	Truant home.
4	"	4	......	Violation state law	Suspended.
4	"	4	......	Vagrancy	Suspended.

Table K. — County of Kings — (Continued).

No. of convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1882.				
1	February.	1	......	Vagrancy	Inebriate home.
1	“	......	1	“	House of refuge.
2	“	......	2	“	House of Good Shepherd
47	“	27	20	“	Jail.
242	“	242	......	Violation city ordinance	Suspended.
15	“	14	1	“ “	Fine.
5	March.	5	......	Affray	Fine.
1	“	1	......	“	Suspended.
1	“	1	......	Assault and battery	Suspended.
6	“	5	1	“ “	Fine.
2	“	2	......	“ “	Jail.
2	“	2	......	Assault to harm	Jail.
70	“	45	25	Intoxication	Fine.
58	“	51	7	“	Suspended.
1	“	1	......	Malicious mischief	Fine.
1	“	1	......	“	Jail.
2	“	2	......	Petit larceny	Suspended.
1	“	1	......	“	Truant home.
1	“	1	......	“	House of refuge.
4	“	2	2	“	Penitentiary.
3	“	3	......	“	Jail.
1	“	1	......	“	Fine.
15	“	15	......	Violating city ordinance	Fine.
7	“	7	......	“ “	Suspended.
5	April.	5	......	Affray	Suspended.
1	“	1	......	“	Fine.
6	“	4	2	Assault and battery	Jail.
5	“	5	......	“ “	Fine.
1	“	1	......	Cruelty to animals	Fine.
345	“	212	133	Intoxication	Fine.
124	“	111	13	“	Suspended.
1	“	1	......	Malicious mischief	Penitentiary.
1	“	1	......	“	Jail.
2	“	1	1	“	Suspended.
4	“	4	......	Petit larceny	Suspended.
1	“	1	......	“	Fine.
2	“	2	......	“	Penitentiary.
3	“	3	......	“	Jail.
1	“	1	......	Truancy	Truant home.
2	“	2	......	Threats	Bonded.
9	“	9	......	Violating city ordinance	Fine.
16	“	16	......	“ “	Suspended.
1	May.	1	......	Assault and battery	Penitentiary.
1	“	......	1	“ “	Bonded.
2	“	2	......	“ “	Fine.
3	“	3	......	“ “	Suspended.
3	“	3	......	Disorderly conduct	Suspended.
2	“	......	2	“	Bonded.
418	“	275	143	Intoxication	Fine.
6	“	6	......	“	Suspended.
1	“	1	......	Malicious mischief	Fine.
1	“	......	1	Petit larceny	Penitentiary.
2	“	2	......	Trespass	Suspended.
1	“	......	1	Vagrancy	Delivered to father.
229	June.	153	76	Intoxication	Fine.

Table K. — (Continued).

COUNTY OF MADISON.

No. of convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1881.				
1	November.	1	......	Assault and battery	Fine.
3	"	1	2	Disorderly person	Fine.
9	"	9	......	Intoxication	Fine.
4	December.	4	......	Assault and battery	Fine.
1	"	1	......	Disorderly person	Jail.
9	"	9	......	Intoxication.	Fine.
1	"	1	......	Petit larceny	Jail.
	1882.				
2	January.	2	......	Disorderly person	Fine.
2	"	2	......	Intoxication	Fine.
1	"	1	......	Tramp	Penitentiary.
1	February.	1	......	Vagrancy	Not stated.
2	March.	2	......	Intoxication	Fine.
4	"	4	......	Malicious mischief	Fine.
1	"	......	1	Vagrancy	Not stated.
1	April.	1	......	Intoxication	Fine.
2	"	2	......	Petit larceny	Fine.
1	"	1	......	"	Penitentiary.
1	"	1	......	"	Jail.
5	May.	5	......	Intoxication	Fine.
2	"	......	2	Petit larceny	Jail.
1	"	1	......	"	Penitentiary.
1	"	1	......	Vagrancy	Not stated.
1	June.	1	......	Disorderly person	Not stated.
6	"	6	......	Intoxication	Fine.
1	July.	1	......	Assault and battery	Fine.
3	"	3	......	Intoxication	Fine.
1	August.	1	......	Assault and battery	Fine.
2	"	2	......	Intoxication.	Fine.
1	"	1	......	Petit larceny	Penitentiary.
1	"	1	......	Tramp	Penitentiary.
1	"	1	......	Vagrancy	Not stated.
1	September.	1	......	Assault	Penitentiary.
2	"	2	......	" and battery	Penitentiary.
1	"	1	......	" "	Fine.
2	"	2	......	Gambling	Fine.
14	"	14	......	Intoxication	Fine.
3	"	3	......	Petit larceny	Fine.
1	"	......	1	"	Jail.
1	"	1	......	Trespass on railroad	Penitentiary.
13	October.	13	......	Intoxication.	Fine.
1	"	1	......	Petit larceny	Fine.
1	"	1	......	Tramp	Penitentiary.
4	"	2	......	Vagrancy	Penitentiary.

COUNTY OF MONROE.

No. of convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1881.				
9	November.	7	2	Assault and battery	Fine.
2	"	2	......	" "	Penitentiary.
2	"	2	......	Disorderly person	Penitentiary.
4	"	4	......	Intoxication.	Fine.
3	"	2	1	Petit larceny	Fine.
7	"	7	......	"	Penitentiary.
4	"	4	......	"	House of refuge.
1	"	1	......	Threats	Bonds.
1	"	1	......	Vagrancy	Penitentiary.
4	"	4	......	"	House of refuge.
4	December.	4	......	Assault and battery	Penitentiary.
4	"	4	......	" "	Fine.

Table K. — County of Monroe — (Continued).

No. of convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1881.				
5	December.	5	......	Petit larceny	Fine.
19	"	18	1	"	Penitentiary.
4	"	4	......	Trespass on railroad	Fine.
2	"	1	1	Vagrancy	House of refuge.
8	"	7	1	"	Penitentiary.
	1882.				
2	January.	2	......	Assault and battery	Penitentiary.
6	"	6	......	" "	Fine.
3	"	3	......	Cock fighting	Fine.
2	"	1	1	Petit larceny	House of refuge.
4	"	4	......	"	Penitentiary.
4	"	4	......	"	Fine.
4	"	3	1	Vagrancy	House of refuge.
7	"	7	......	"	Penitentiary.
2	February.	2	......	Assault and battery	Penitentiary.
1	"	1	......	" "	House of refuge.
12	"	10	2	" "	Fine.
1	"	1	......	Disorderly person	Bonds.
2	"	2	......	Petit larceny	Fine.
4	"	3	1	"	Penitentiary.
8	"	7	1	"	House of refuge.
2	"	2	......	Trespass on railroad	Fine.
3	"	3	......	Vagrancy	House of refuge.
1	"	1	......	"	Penitentiary.
1	March.	1	......	Assault and battery	Penitentiary.
8	"	7	1	" "	Fine.
1	"	1	......	" "	House of refuge.
2	"	2	......	Disorderly person	House of refuge.
11	"	11	......	Petit larceny	House of refuge.
18	"	18	......	"	Penitentiary.
2	"	2	......	"	Fine.
6	"	6	......	Vagrancy	House of refuge.
1	"	1	......	"	Penitentiary.
1	April.	......	1	Assault and battery	Penitentiary.
9	"	9	......	" "	Fine.
1	"	1	......	Petit larceny	Fine.
4	"	4	......	"	House of refuge.
5	"	5	......	"	Penitentiary.
1	"	1	......	Trespass on railroad	Penitentiary.
2	"	1	1	Vagrancy	Penitentiary.
3	May.	1	2	Assault and battery	Penitentiary.
8	"	6	2	" "	Fine.
2	"	2	......	Intoxication	Fine.
1	"	1	......	Petit larceny	Fine.
2	"	2	......	"	House of refuge.
3	"	3	......	"	Penitentiary.
1	"	1	......	Vagrancy	House of refuge.
12	June.	12	......	Assault and battery	Fine.
6	"	6	......	" "	Penitentiary.
1	"	1	......	Disorderly person	Bonds.
1	"	1	......	" conduct	Fine.
2	"	2	......	Intoxication	Fine.
3	"	3	......	Petit larceny	Fine.
4	"	2	2	"	Penitentiary.
1	"	1	......	"	House of refuge.
4	"	4	......	Vagrancy	House of refuge.
1	July.	1	......	Assault and battery	Penitentiary.
4	"	4	......	" "	Fine.
1	"	1	......	Intoxication	Fine.
1	"	1	......	Petit larceny	Fine.
3	"	3	......	"	Penitentiary.
1	"	1	......	"	House of refuge.
1	"	1	......	Vagrancy	Penitentiary.
1	"	1	......	Violating excise law	Fine.

Table K.— (Continued).

COUNTY OF NEW YORK.

No. of Convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1881.				
1	November.	1	......	Assault	Fine.
33	"	33	......	" and battery	Fine.
8	"	8	......	" "	City prison.
15	"	14	1	" "	Penitentiary.
30	"	30	......	Cruelty to animals	Fine.
1	"	1	......	Embezzlement	Penitentiary.
1	"	1	......	Indecent assault	Penitentiary.
1	"	1	......	Malicious mischief	Penitentiary.
3	"	3	......	Obstructing street railroad	Fine.
1	"	1	......	Petit larceny	R. C. protectory.
28	"	25	3	"	City prison.
16	"	15	1	"	House of refuge.
103	"	92	11	"	Penitentiary.
2	"	2	......	"	Fine.
17	"	17	......	Violating sanitary code	Fine.
46	December.	44	2	Assault and battery	Fine.
4	"	4	......	" "	City prison.
16	"	16	......	" "	Penitentiary.
1	"	1	......	" to steal	Penitentiary.
1	"	1	......	Cruelty to children	Fine.
44	"	44	......	" animals	Fine.
2	"	2	......	Embezzlement	City prison.
4	"	4	......	"	Penitentiary.
4	"	4	......	Indecent exposure	Penitentiary.
2	"	2	......	" assault	Fine
1	"	1	......	Malicious mischief	City prison.
5	"	5	......	Obstructing street railroad	Fine.
11	"	11	......	Petit larceny	R. C. protectory.
13	"	12	1	"	House of refuge.
105	"	91	14	"	Penitentiary.
24	"	23	1	"	City prison.
1	"	1	......	"	City prison and fine.
5	"	5	......	"	Fine.
1	"	1	......	Violating excise law	Fine.
86	"	82	4	" sanitary code	Fine.
1	"	1	......	" "	Fine and imprisonment.
	1882.				
1	January.	1	......	Acting as engineer unlawfully	Fine.
3	"	3	......	Allowing child to play pool	Fine.
1	"	1	......	" "	City prison.
20	"	20	......	Assault and battery	Penitentiary.
1	"	1	......	" "	City prison.
1	"	1	......	" "	Asylum.
35	"	31	4	" "	Fine.
21	"	21	......	Cruelty to animals	Fine.
1	"	......	1	" children	Penitentiary.
1	"	1	......	Destroying telegrams	Juvenile asylum.
1	"	1	......	Embezzlement	Fine.
1	"	1	......	"	City prison.
1	"	1	......	"	Penitentiary.
2	"	2	......	Indecent assault	Penitentiary.
1	"	1	......	Malicious mischief	City prison.
1	"	1	......	"	Fine.
1	"	1	......	Misdemeanor	Penitentiary.
2	"	2	......	Obstructing street railroad	Fine.
68	"	52	16	Petit larceny	Penitentiary.
27	"	21	6	"	City prison.
16	"	15	1	"	House of refuge.
9	"	8	1	"	Fine.
1	"	1	......	Selling liquor to minor	Fine.
1	"	1	......	Unlawfully intruding	Fine.

Table K. — County of New York — (Continued).

No. of convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1882.				
2	January.	2	......	Violating city ordinance	Fine.
34	"	30	4	" sanitary code	Fine.
7	"	7	......	" session laws	Fine.
34	February.	32	2	Assault and battery	Fine.
17	"	17	......	" "	Penitentiary.
1	"	1	......	" "	City prison.
1	"	1	......	" "	Bonded.
1	"	1	......	" to steal	Penitentiary.
1	"	1	......	" "	House of refuge.
12	"	12	......	Cruelty to animals	Fine.
1	"	......	1	" children	Penitentiary.
1	"	1	......	" "	Fine.
3	"	3	......	Embezzlement	City prison.
1	"	1	......	"	Penitentiary.
2	"	2	......	Indecent exposure	Penitentiary.
1	"	1	......	Malicious mischief	Penitentiary.
1	"	1	......	"	Fine.
1	"	1	......	Obstructing street car	Fine.
13	"	13	......	Petit larceny	Fine.
1	"	1	......	"	Juvenile asylum.
23	"	20	3	"	City prison.
6	"	6	......	"	R. C. protectory.
8	"	8	......	"	House of refuge.
79	"	71	8	"	Penitentiary.
2	"	2	......	Selling liquor to child	Fine.
40	"	35	5	Violating sanitary code	Fine.
1	March.	1	......	Assault	Fine.
30	"	28	2	" and battery	Fine.
13	"	12	1	" "	City prison.
31	"	31	......	" "	Penitentiary.
17	"	17	......	Cruelty to animals	Fine.
1	"	1	......	Employing a child to beg	Fine.
1	"	1	......	Indecent assault	Penitentiary.
2	"	2	......	" exposure	Penitentiary.
3	"	2	1	Petit larceny	Fine.
1	"	1	......	"	Fine and city prison.
3	"	3	......	"	Juvenile asylum.
3	"	3	......	"	R. C. protectory.
31	"	27	4	"	City prison.
11	"	10	1	"	House of refuge.
110	"	99	11	"	Penitentiary.
1	"	1	......	Selling liquor to minor	Fine.
1	"	1	......	Unlawfully riding on street car	Fine.
2	"	2	......	Violating city ordinance	Fine.
32	"	27	5	" sanitary code	Fine.
23	April.	22	1	Assault and battery	Fine.
1	"	......	1	" "	Fine and city prison.
20	"	19	1	" "	Penitentiary.
5	"	3	2	" "	City prison.
14	"	14	......	Cruelty to animals	Fine.
1	"	1	......	" "	City prison.
3	"	3	......	" children	Fine.
1	"	1	......	Carrying burglars' tools	Penitentiary.
4	"	4	......	Embezzlement	Penitentiary.
1	"	......	1	Keeping disorderly house	Penitentiary and fine.
3	"	3	......	Petit larceny	House of refuge.
2	"	2	......	"	Fined.
24	"	20	4	"	City prison.
4	"	4	......	"	R. C. protectory.
82	"	68	14	"	Penitentiary.

Table K. — County of New York — (Continued).

No. of Convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1882.				
1	April.	1	......	Unlawfully riding on street car	Fine.
1	“	1	......	Violating session laws	Fine.
20	“	16	4	“ sanitary code	Fine.
35	May.	31	4	Assault and battery	Fine.
2	“	1	1	“ “	City prison.
22	“	21	1	“ “	Penitentiary.
1	“	1	......	“ to steal	Penitentiary.
1	“	1	......	Attempted rescue	Fine.
12	“	12	......	Cruelty to animals	Fine.
3	“	3	......	“ “	City prison.
1	“	1	......	“ “	City prison and fine.
1	“	1	......	Embezzlement	City prison.
1	“	1	......	“	Penitentiary.
1	“	1	......	Indecent assault	Penitentiary.
1	“	1	......	“ exposure	Penitentiary.
1	“	1	......	Malicious mischief	Fine.
2	“	2	......	Misdemeanor	Fine.
1	“	1	......	“	Penitentiary.
2	“	2	......	Obstructing street car	Fine.
6	“	5	1	Petit larceny	Fine.
2	“	2	......	“	Fine and city prison.
27	“	22	5	“	City prison.
7	“	7	7	“	House of refuge.
1	“	1	......	“	R. C. protectory.
82	“	73	9	“	Penitentiary.
20	“	18	2	“	Fine.

COUNTY OF NIAGARA.

	1881.				
3	November.	3	......	Assault and battery	Jail.
1	“	......	1	Breach of peace.	Fine.
1	“	1	......	Disorderly conduct	Fine.
12	“	12	......	Intoxication.	Fine.
1	“	1	......	Petit larceny	Work-house.
1	December.	1	......	Assault and battery	Work-house.
3	“	3	......	Disorderly person	Fine.
17	“	11	......	Intoxication.	Fine.
2	“	1	1	Petit larceny	Fine.
1	“	1	......	“	Work-house.
1	“	1	......	“	House of refuge.
1	“	1	......	“	Jail.
1	“	1	......	Vagrancy	Not stated.
	1882.				
1	January.	1	......	Disturbing religious meeting.	Fine.
1	“	1	......	Disorderly person	Fine.
1	“	1	......	“	Work-house.
12	“	12	......	Intoxication.	Fine.
1	“	1	......	Petit larceny	Jail.
1	“	1	......	“	Work-house.
1	February.	1	......	Assault and battery	Jail.
5	“	5	......	“ “	Fine.
1	“	1	......	Disturbing religious meeting.	Fine.
1	“	1	......	Disorderly person	Jail.
8	“	8	......	Intoxication.	Fine.
1	“	1	......	Petit larceny	Fine.
2	March.	2	......	Disorderly conduct	Fine.
16	“	16	......	Intoxication	Fine.
3	“	3	......	“	Jail.
9	“	9	......	Petit larceny	House of refuge.

Table K. — County of Niagara — (Continued).

No. of convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1882.				
1	April.	1	.....	Intoxication	Jail.
12	“	12	......	“	Fine.
3	May.	3	......	Assault and battery.........	Fine.
2	“	2	.....	Disorderly person...........	Fine.
17	“	17	......	Intoxication.	Fine.
2	“	2	......	Petit larceny	House of refuge.
1	June.	1	......	Vagrancy..................	Jail.
2	“	2	......	“	Not stated.
2	July.	2	......	Assault and battery.........	Fine.
1	“	1	......	“ “	Penitentiary.
1	“	1	......	Defrauding innkeeper.	Jail.
24	“	20	4	Intoxication	Fine.
1	“	1	......	Malicious mischief	Fine.
1	“	1	......	Petit larceny	House of refuge.
1	“	......	1	Prostitution	Work-house.
1	“	1	......	Vagrancy,..................	Jail.
3	August.	3	......	Assault and battery.........	Fine.
6	“	6	......	Disorderly conduct..........	Fine.
11	“	5	6	“ person...........	Fine.
18	“	18	......	Intoxication.	Fine.
2	“	......	2	Keeping disorderly house ...	Fine.
2	“	2	......	Violating excise law.........	Fine.
3	“	3	.....	Vagrancy......	Not stated.
1	September.	1	......	Assault and battery.........	Jail.
1	“	1	......	“ “	Fine.
4	“	4	......	Intoxication	Fine.
1	“	1	.....	Malicious mischief.	Fine.
2	“	2	......	Petit larceny	Fine.
7	October.	6	1	Assault and battery.........	Fine.
1	“	1	......	Cruelty to animals.	Fine.
19	“	19	.....	Intoxication	Fine.
1	“	1	......	Petit larceny	Fine.
1	“	1	......	“	House of refuge.

COUNTY OF ONEIDA.

No. of convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1881.				
3	November.	3	......	Assault and battery..........	Fine.
1	“	1	.....	“ “	Fine and imprisonment.
1	“	1	......	“ “	Penitentiary.
23	“	18	5	Intoxication.	Fine.
3	“	3	......	Petit larceny	Fine.
1	“	1	......	“	Jail.
2	“	2	......	“	Penitentiary.
1	“	1	......	Vagrancy............	Penitentiary.
1	“	1	......	“	Jail.
1	December.	1	......	Assault and battery.....	Jail.
3	“	3	......	“ “	Penitentiary.
1	“	1	......	“ “	Fine.
1	“	1	......	“ “	Fine and imprisonment.
2	“	2	.....	Cruelty to animals............	Fine.
41	“	37	4	Intoxication..................	Fine.
3	“	3	......	Petit larceny	Penitentiary.
2	“	2	......	Tramp	Penitentiary.
2	“	2	......	“	Fine.
1	“	1	......	Vagrancy	Fine.
1	“	1	......	“	Poor-house.
	1882.				
1	January.	1	......	Assault and battery...........	Fine.
4	“	4	......	“ “	Penitentiary.

Table K.—County of Oneida—(Continued).

No. of convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1882.				
1	January.	1	.....	Intoxication	Penitentiary.
2	"	1	1	"	County house.
18	"	13	5	"	Fine
2	"	2	......	Petit larceny	Fine.
1	"	1	......	"	Jail.
1	"	1	......	"	Penitentiary.
4	"	4	......	Vagrancy	Penitentiary.
2	"	2	......	"	County house.
20	February.	17	3	Intoxication	Fine.
2	"	1	1	"	Penitentiary.
3	"	3	......	Petit larceny	Penitentiary.
1	"	1	......	"	Fine and imprisonment.
6	"	6	.....	Vagrancy	Penitentiary.
1	"	1	......	"	Jail.
1	March.	1	......	Assault and battery	Fine.
20	"	14	6	Intoxication	Fine.
1	"	1	......	Malicious mischief.	Penitentiary.
1	"	1	......	Petit larceny	Jail.
1	"	1	......	"	Fine.
1	April.	1	......	Assault and battery	Fine.
2	"	2	......	" "	Penitentiary.
55	"	46	9	Intoxication	Fine.
1	"	1	......	Malicious injury	Penitentiary.
2	"	2	......	Petit larceny	Penitentiary.
1	"	1	......	Trespass on railroad	Fine.
1	"	1	......	Vagrancy	Penitentiary.
2	"	2	......	"	Jail.
4	"	4	......	Assault and battery	Fine and imprisonment.
2	"	2	......	" "	Fine.
37	"	34	3	Intoxication	Fine.
1	"	1	......	Petit larceny	House of refuge.
1	"	1	......	"	Penitentiary.
2	"	2	......	Violating city ordinance	Fine.
7	June.	7	......	Assault and battery	Fine.
2	"	2	......	" "	Jail.
2	"	2	......	Breach of peace	Fine.
2	"	1	1	Disorderly conduct	Fine.
83	"	73	10	Intoxication	Fine.
1	"	1	......	"	Jail.
5	"	1	4	"	Penitentiary.
3	"	1	2	Keeping disorderly house	Fine.
1	"	1	......	Petit larceny	Fine.
5	"	5	......	"	Jail.
3	"	3	......	"	Penitentiary.
4	"	4	....	Tramp	Penitentiary.
3	"	3	....	Vagrancy	Jail.
9	"	6	3	Violating city ordinance	Fine.
3	"	3	....	" Sunday law	Fine.
2	July.	2	....	Assault and battery	Fine.
3	"	3	....	" "	Penitentiary.
2	"	2	....	Disorderly person	Fine.
83	"	70	13	Intoxication	Fine.
2	"	2	....	"	Penitentiary.
1	"	1	......	Petit larceny	Penitentiary.
2	"	1	1	"	Fine.
4	"	4	....	"	Jail.
2	"	2	....	"	House of refuge.
1	"	......	1	Prostitution	Fine.
2	"	2	....	Tramp	Penitentiary.
2	"	1	1	Violating city ordinance	Fine.
1	August.	1	....	Assault	Penitentiary.
1	"	1	....	" and battery	Fine.

Table K.— County of Oneida — (Continued).

No. of convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1882.				
30	August.	21	9	Intoxication	Fine.
1	"	1	......	"	Penitentiary.
1	"	......	1	Petit larceny	Penitentiary.
1	"	1	......	"	Fine.
1	"	......	1	Prostitution	Jail.
9	"	9	......	Tramp	Jail.
5	"	5	......	"	Penitentiary.
3	"	3	......	Vagrancy	Penitentiary.
1	"	1	......	"	Jail.
3	"	1	2	Violating city ordinance	Fine.
1	September.	1	......	Assault and battery	Fine.
41	"	40	1	Intoxication	Fine.
1	"	1	......	Petit larceny	Fine.
1	"	1	......	"	Fine and imprisonment.
1	"	1	......	"	House of refuge.
1	"	1	......	"	Penitentiary.
1	"	1	......	"	Jail.
1	"	1	......	Tramp	Jail.
1	"	1	......	"	Penitentiary.
1	"	1	......	Violating city ordinance	Fine.
1	October.	1	......	Assault and battery	Fine.
1	"	1	......	Breach of peace	Fine.
36	"	33	3	Intoxication	Fine.
1	"	1	......	Petit larceny	Fine.
1	"	1	......	"	Penitentiary.
2	"	2	......	Tramp	Jail.
1	"	1	......	Vagrancy	Jail.
1	"	......	1	Violating city ordinance	Fine.

COUNTY OF ONONDAGA.

No. of convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1881.				
4	November.	4	......	Assault and battery	Penitentiary.
1	"	1	......	" "	Fine.
10	"	10	......	Breach of peace.	Fine.
52	"	51	1	Intoxication	Fine.
1	"	1	.....	Interfering with officer	Fine.
5	"	5	......	Petit larceny	Penitentiary.
1	"	1	......	"	House of refuge.
1	"	1	......	"	R. C. protectory.
5	"	5	......	Trespass on railroad.	Fine.
1	"	......	1	Violating excise law	Fine.
2	"	2	......	" city ordinance	Fine.
1	"	1	......	" "	Penitentiary.
1	"	1	......	Vagrancy	Poor-house.
3	"	3	......	"	Jail.
1	"	1	......	"	Penitentiary.
4	December.	3	1	Assault and battery	Penitentiary.
1	"	1	......	" "	Fine.
3	"	3	......	Breach of peace	Fine.
1	"	1	......	Disorderly person	Fine.
49	"	45	4	Intoxication	Fine.
1	"	1	......	Interfering with officer	Fine.
15	"	7	8	Inmate disorderly house	Fine.
5	"	2	3	Keeping "	Fine.
1	"	......	1	Prostitution	Fine.
3	"	3	......	Petit larceny	Fine.
1	"	1	.....	"	Penitentiary.
4	"	4	......	Vagrancy	Penitentiary.
5	"	5	......	"	Jail.
1	"	1	......	Violating city ordinance	Fine.

Table K.— County of Onondaga —(Continued).

No. of convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1882.				
3	February.	3	......	Assault and battery	Fine.
1	“	1	......	“ “	Penitentiary.
5	“	5	......	Breach of peace.	Fine.
3	“	1	2	Disorderly person	Jail.
37	“	34	3	Intoxication.	Fine.
2	“	1	1	Inmate disorderly house	Fine.
1	“	1	......	Keeping “	Fine.
1	“	1	......	Petit larceny	Fine.
1	“	1	......	“	Penitentiary.
3	“	3	......	Vagrancy	Jail.
5	March.	5	......	Assault and battery	Penitentiary.
6	“	6	......	“ “	Fine.
4	“	4	.....	Breach of peace,	Fine.
8	“	8	......	Cock fighting	Fine.
1	“	1	......	Committing nuisance	Fine.
43	“	39	4	Intoxication	Fine.
13	“	2	11	Inmate disorderly house	Fine.
1	“	8	......	“ “	Penitentiary.
10	“	1	2	Keeping “	Fine.
1	“	......	1	Prostitution	Fine.
7	“	5	2	Petit larceny	Penitentiary.
14	“	14	......	Trespass on railroad	Fine.
2	“	2	......	Violating city ordinance	Fine.
1	“	1	......	Vagrancy	Penitentiary.
3	“	3	......	“	Jail.
2	April.	2	......	Assault and battery	Penitentiary.
7	“	7	......	“ “	Fine.
6	“	6	......	Breach of peace.	Fine.
2	“	2	......	Disorderly conduct	Fine.
50	“	48	2	Intoxication	Fine.
5	“	4	1	Inmate disorderly house	Fine.
2	“	1	1	Keeping “	Fine.
2	“	2	......	Petit larceny	Fine.
1	“	1	......	“	House of refuge.
9	“	8	1	“	Penitentiary.
1	“	1	......	Vagrancy	Penitentiary.
1	“	1	......	“	Not stated.
2	May.	2	.....	Assault and battery	Penitentiary.
4	“	4	......	“ “	Fine.
1	“	1	......	Attempt at petit larceny	Penitentiary.
2	“	2	......	Breach of peace.	Penitentiary.
8	“	8	......	“ “	Fine.
1	“	1	......	Cruelty to animals	Fine.
33	“	28	5	Intoxication.	Fine.
2	“	......	2	Inmate disorderly house	Fine.
1	“	......	1	Keeping disorderly house	Fine.
1	“	1	......	Petit larceny	House of refuge.
4	“	4	......	“	Penitentiary.
1	“	1	......	“	Poor-house.
1	“	1	......	“	R. C. protectory.
3	“	......	3	Prostitution.	Fine.
2	“	2	......	Violating city ordinance	Fine.
2	“	2	......	Trespass on railroad	Fine.
1	“	1	......	Vagrancy	Poor-house.
1	“	1	......	Willful injuring horse	Penitentiary.
2	June.	......	2	Assault and battery	Penitentiary.
4	“	4	......	“ “	Fine.
8	“	8	......	Breach of peace	Fine.
1	“	......	1	Disorderly conduct	Fine.
59	“	55	4	Intoxication.	Fine.
8	“	......	8	Inmate disorderly house	Fine.
3	“	3	......	Petit larceny	Penitentiary.

Table K. — County of Onondaga — (Continued).

No. of convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1882.				
3	June.	3	......	Vagrancy	Penitentiary.
5	“	4	1	Violating city ordinance	Fine.
6	July.	6	......	Assault and battery	Fine.
2	“	2	......	“ “	Suspended.
4	“	4	......	“ “	Penitentiary.
2	“	2	......	Breach of peace	Penitentiary.
14	“	10	4	“ “	Fine.
2	“	......	2	Disorderly conduct	Fine.
65	“	55	10	Intoxication	Fine.
1	“	1	......	Indecent exposure	Fine.
14	“	13	1	Inmate disorderly house	Fine.
2	“	1	1	Keeping disorderly house	Fine.
2	“	2	......	Petit larceny	Fine.
6	“	5	1	“	Penitentiary.
3	“	1	2	“	House of refuge.
5	“	......	5	Prostitution	Fine.
6	“	6	......	Trespass on railroad	Fine.
4	“	4	......	Violating city ordinance	Fine.
4	“	4	......	Vagrancy	Jail.
1	August.	1	......	Assault and battery	Penitentiary.
6	“	6	......	“ “	Fine.
9	“	7	2	Breach of peace	Fine.
1	“	1	......	“ “	Penitentiary.
1	“	1	......	Cruelty to animals	Fine.
1	“	......	1	Disorderly conduct	Fine.
72	“	62	10	Intoxication	Fine.
6	“	4	2	Inmate disorderly house	Fine.
1	“	......	1	Keeping disorderly house	Fine.
1	“	1	......	“ gambling house	Fine.
3	“	3	......	Petit larceny	Fine.
1	“	1	......	“	Penitentiary.
2	“	2	......	“	House of refuge.
3	“	.....	3	Prostitution	Fine.
1	“	1	......	Trespass on railroad	Fine.
1	“	1	......	Violating excise law	Fine.
3	“	3	......	“ city ordinance	Fine.
2	“	2	......	Vagrancy	Jail.
3	“	3	......	“	Penitentiary.
4	September.	4	......	Assault and battery	Penitentiary.
8	“	6	2	“ “	Fine.
9	“	9	......	Breach of peace	Fine.
5	“	5	......	“ “	Penitentiary.
1	“	1	......	Disorderly conduct	Penitentiary.
1	“	1	......	“ “	Fine.
2	“	......	2	“ person	Jail.
74	“	69	5	Intoxication	Fine.
9	“	1	8	Inmate disorderly house	Fine.
2	“	2	......	Malicious mischief	Penitentiary.
6	“	3	3	Petit larceny	Penitentiary.
1	“	1	......	“	Fine.
1	“	......	1	Prostitution	Fine.
2	“	2	......	Trespass on railroad	Fine.
1	“	1	......	Truancy	Penitentiary.
2	“	2	......	Vagrancy	Jail.
2	“	2	......	Violating city ordinance	Fine.
12	October.	12	......	Assault and battery	Fine.
11	“	11	......	“ “	Penitentiary.
1	“	1	......	Breach of peace	Penitentiary.
5	“	5	......	“ “	Fine.
2	“	2	......	Cruelty to animals	Fine.
1	“	1	......	Cruelly treating horse	Penitentiary.
73	“	70	3	Intoxication	Fine.

Table K.— County of Onondaga —(Continued).

No. of convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1882.				
4	October.	4	......	Inmate disorderly house.....	Fine.
1	"	1	......	Indecent exposure...........	Fine.
2	"	2	......	Malicious mischief..........	Fine.
16	"	16	......	Petit larceny.....	Penitentiary.
1	"	1	......	"	House of refuge.
1	"	1	......	"	Fine.
2	"	......	2	Prostitution..................	Fine.
5	"	5	......	Trespass on railroad..........	Fine.
1	"	1	......	Violating excise law..........	Fine.
2	"	2	......	" city ordinance	Fine.
4	"	4	......	Vagrancy.....................	Jail.
1	"	1	......	Willful injury................	Penitentiary.

COUNTY OF ONTARIO.

No. of convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1881.				
1	November.	1	......	Assault and battery..........	Penitentiary.
4	"	4	......	" "	Fine.
3	"	3	......	Disorderly person............	Fine.
4	"	4	......	" conduct...........	Jail.
44	"	41	3	Intoxication.................	Fine.
3	"	3	......	Petit larceny..	Fine.
5	"	5	......	Tramp...........	Fine.
6	"	6	......	"	Penitentiary.
3	"	3	......	Vagrant	Jail.
1	"	1	......	Violating excise law..	Fine.
2	December.	2	......	Assault and battery..........	Fine.
5	"	4	1	Drunk and disorderly	Fine.
2	"	2	......	Disorderly person............	Jail.
26	"	26	......	Intoxication.................	Fine.
1	"	1	......	Profanity....................	Fine.
2	"	2	......	Petit larceny.................	Fine and imprisonment.
6	"	6	......	"	Fine.
9	"	9	......	Tramp........................	Penitentiary.
1	"	1	......	"	Jail.
6	"	6	......	"	Not stated.
1	"	1	......	Trespass on railroad..........	Fine.
1	"	1	......	Vagrant	Penitentiary.
3	"	3	......	"	Jail.
	1882.				
1	January.	1	......	Assault and battery..........	Fine.
1	"	1	......	Breach of peace	Fine.
1	"	1	......	Disorderly person............	Fine.
1	"	......	1	Drunk and disorderly	Jail.
1	"	1	......	Petit larceny................	Jail.
1	"	1	......	"	Penitentiary.
18	"	18	......	Intoxication	Fine.
1	"	1	......	Trespass on railroad..........	Jail.
1	"	1	......	Tramp........................	Penitentiary.
10	"	10	......	Vagrancy.....................	Jail.
2	"	......	2	"	Poor-house.
1	February.	1	......	Assault and battery	Jail.
2	"	1	1	Drunk and disorderly........	Jail.
2	"	2	......	" "	Fine.
2	"	2	......	Disorderly person............	Fine.
1	"	1	......	"	Jail.
37	"	37	......	Intoxication.................	Fine.
1	"	1	......	Petit larceny.........	House of refuge.
2	"	2	......	Trespass on railroad..........	Jail.
8	"	8	......	Tramp........................	Penitentiary.
8	"	8	......	Vagrancy.....................	Jail.

Table K. — County of Ontario — (Continued).

No. of convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1882.				
1	March.	1	......	Assault and battery	Jail.
3	"	3	......	" "	Fine.
2	"	2	......	Disorderly person	Fine.
2	"	2	......	" "	Penitentiary.
1	"	1	......	" "	Jail.
1	"	1	......	Exposure of person	Jail.
2	"	2	......	Intoxication	Jail.
11	"	11	......	"	Fine.
1	"	1	......	Malicious mischief	Fine.
2	"	2	......	Petit larceny	Fine and imprisonment.
1	"	1	......	"	Jail.
1	"	1	......	Tramp	Jail.
1	"	1	......	"	Penitentiary.
1	April.	1	......	Assault and battery	Penitentiary.
2	"	2	......	" "	Fine.
1	"	1	......	Cruelty to animals	Fine.
4	"	3	1	Disorderly person	Jail.
1	"	1	......	" "	Penitentiary.
1	"	......	1	Keeping bawdy house	Fine.
3	"	3	......	Petit larceny	Fine.
2	"	2	......	"	Penitentiary.
2	"	2	......	"	House of refuge.
3	"	3	......	Tramp	Penitentiary.
1	"	1	......	Trespass on railroad	Jail.
2	"	2	......	Vagrancy	Jail.
1	May.	1	......	Assault and battery	Fine.
18	"	18	......	Disorderly person	Fine.
4	"	4	......	" "	Jail.
1	"	1	......	Disorderly conduct	Penitentiary.
1	"	1	......	Petit larceny	Penitentiary.
1	"	1	......	"	House of refuge.
1	"	1	......	Violating excise law	Fine.
1	"	1	......	Vagrancy	Jail.
1	"	1	......	"	Penitentiary.
4	June.	4	......	Assault and battery	Fine.
29	"	28	1	Disorderly person	Fine.
2	"	2	......	" "	Jail.
3	"	3	......	Intoxication	Fine.
1	"	1	......	Petit larceny	Fine.
1	"	1	......	"	Jail.
1	"	1	......	"	Fine and imprisonment.
1	"	1	......	Tramp	Jail.
1	"	1	......	"	Penitentiary.
1	"	1	......	Threats	Bonds.
1	"	......	1	Vagrancy	Jail.
1	July.	1	......	Assault on officer	Fine.
17	"	17	......	Disorderly person	Fine.
4	"	3	1	" "	Jail.
1	"	1	......	" "	Penitentiary.
7	"	7	......	Intoxication	Fine.
1	"	1	......	Keeping gambling house	Fine.
2	"	2	......	Violating excise law	Fine.
1	August.	1	......	Assault	Penitentiary.
2	"	2	......	" and battery	Jail.
1	"	1	......	Breach of peace	Fine.
1	"	1	......	Drunk and disorderly	Jail.
1	"	1	......	Disorderly person	Jail.
1	"	1	......	" "	Penitentiary.
28	"	27	1	" "	Fine.
4	"	4	......	Intoxication	Fine.
4	"	......	4	Keeping bawdy house	Fine.

Table K.— County of Ontario.— (Continued).

No. of convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1882.				
1	August.	1	......	Petit larceny	Fine.
1	“	1	......	“	Penitentiary.
2	“	2	......	Tramp	Penitentiary.
2	“	2	......	Vagrancy	Jail.
3	September.	3	......	Assault and battery	Fine.
3	“	3	......	Breach of peace	Fine.
11	“	9	2	Disorderly person	Fine.
2	“	2	......	“ “	Jail.
2	“	2	......	Drunk and disorderly	Penitentiary.
1	“	1	......	Intoxication	Jail.
35	“	35	......	“	Fine.
1	“	1	......	False representations	Fine.
1	“	1	......	Petit larceny	Fine.
2	“	1	1	“	Jail.
1	“	1	......	Violating excise law	Fine.
1	“	1	......	Violating health law	Fine.
3	“	3	......	Vagrancy	Jail.
1	October.	1	......	Assault and battery	Jail.
2	“	2	......	“ “	Fine.
8	“	7	1	Disorderly person	Fine.
1	“	1	......	“ “	Jail.
1	“	1	......	Defrauding innkeeper	Fine.
1	“	1	......	Embezzlement	Fine.
2	“	2	......	Intoxication	Fine.
1	“	1	......	Petit larceny	Fine.
1	“	1	......	Resisting an officer	Fine.

COUNTY OF ORLEANS.

No. of convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1881.				
1	November.	1	......	Assault and battery	Fine.
1	“	1	......	Petit larceny	Fine.
6	December.	6	......	Intoxication	Fine.
1	“	1	......	Petit larceny	Fine.
2	“	2	......	“	House of refuge.
	1882.				
2	January.	2	......	Disorderly person	Jail.
4	“	4	......	“ “	Fine.
1	“	1	......	Drunk and disorderly	Fine and imprisonment.
5	“	4	1	Intoxication	Fine.
1	“	1	......	Vagrancy	Jail.
1	February.	1	......	Assault and battery	Jail.
1	“	1	......	Disorderly person	Jail.
1	“	1	......	“ “	Penitentiary.
1	“	1	......	“ “	Fine.
1	“	1	......	Intoxication	Fine.
1	“	1	......	“	Penitentiary.
2	“	2	......	Petit larceny	Penitentiary.
1	March.	1	......	Intoxication	Penitentiary.
2	“	2	......	“	Fine.
1	“	1	......	Vagrancy	Fine.
1	“	1	......	“	Penitentiary.
1	“	1	......	“	Poor-house.
8	“	8	......	“	Jail.
1	April.	1	......	Drunk and disorderly	Jail.
2	“	2	......	Intoxication	Fine.
1	“	1	......	“	Penitentiary.
1	“	1	......	Petit larceny	House of refuge.
1	“	1	......	“	Fine.
1	“	1	......	“	Jail.
10	“	10	......	Vagrancy	Jail.
1	“	1	......	“	Penitentiary.

Table K. — County of Orleans — (Continued).

No. of convictions.	When conv cted.	Males.	Females.	Offense.	Sentence.
	1882.				
1	May.	1	......	Assault and battery	Fine.
3	“	3	......	Intoxication	Fine.
1	“	1	......	Petit larceny	Fine.
1	June.	1	......	Breach of peace	Fine
1	“	1	......	Intoxication	Fine.
1	“	1	......	Indecent exposure	Fine.
1	“	1	......	Petit larceny	Fine.
2	July.	2	......	Intoxication	Fine.
1	“	1	......	Malicious trespass	Fine.
1	“	1	......	Petit larceny	Jail.
1	August.	1	......	Drunk and disorderly	Fine.
2	“	2	......	Intoxication	Fine.
1	“	1	......	Violating excise law	Fine.
1	“	......	1	Violating village ordinance	Fine.
3	September.	3	.....	Assault and battery	Fine.
6	“	6	......	Intoxication	Fine.
1	October.	1	......	Disorderly conduct	Fine.
1	“	1	......	Drunk and disorderly	Penitentiary.
1	“	1	......	Intoxication	Fine.

COUNTY OF OSWEGO.

No. of convictions.	When conv cted.	Males.	Females.	Offense.	Sentence.
	1881.				
2	November.	2	......	Assault and battery	Penitentiary
1	“	1	......	“ “	Fine.
1	“	1	......	Drunk and disorderly	Fine.
1	“	1	......	Intoxication	Fine.
1	December.	1	......	Assault and battery	Fine.
	1882.				
2	January.	2	......	“ “	Fine.
1	“	1	......	“ “	Penitentiary.
2	“	2	......	Disorderly conduct	Fine.
4	“	4	......	Intoxication.	Fine.
1	“	1	......	“	Penitentiary.
1	“	......	1	Keeping disorderly house	Fine.
1	“	......	1	Prostitution	Fine.
2	“	1	1	Petit larceny	Fine and imprisonment.
3	February.	3	......	Cruelly treating horse	Fine and imprisonment.
1	“	1	......	Disorderly conduct	Fine.
1	“	1	......	Intoxication	Fine.
1	“	1	......	Petit larceny	Jail.
1	March.	1	......	Assault and battery	Fine.
1	“	1	......	Indecent exposure	Fine.
1	“	1	......	Intoxication	Fine.
1	“	1	......	“	Jail.
1	“	......	1	Keeping disorderly house	Fine.
1	April.	1	......	Disorderly conduct	Fine.
4	“	2	2	Intoxication	Fine.
1	“	1	......	“	Poor-house.
3	“	1	2	Keeping disorderly house	Fine.
1	“	1	......	Malicious injury	Penitentiary.
6	“	......	6	Prostitution	Fine.
1	May.	1	......	Assault and battery	Fine and imprisonment.
1	“	1	......	Drunk and disorderly	Fine.
1	“	1	......	Disturbing public meeting	Fine.
1	“	1	......	Disorderly person	Bonds.
3	“	2	1	Intoxication	Fine.
2	“	2	......	Malicious injury	Fine and imprisonment.
1	“	1	......	Profanity	Fine.
2	“	2	......	Violating Sunday laws	Fine.

Table K.— County of Oswego — (Continued).

No. of convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1882.				
1	June.	1	......	Disorderly conduct	Fine.
5	"	5	......	Intoxication	Fine.
1	"	1	......	Petit larceny	Jail.
2	July.	2	......	Assault and battery	Jail.
4	"	4	......	" "	Fine.
1	"	1	......	" "	Fine and imprisonment.
2	"	1	1	" "	Penitentiary.
4	"	3	1	Disorderly conduct	Fine.
3	"	3	......	Intoxication	Fine.
2	August.	2	......	Assault and battery	Fine.
2	"	2	......	" "	Fine and imprisonment.
1	"	1	......	Disorderly person	Jail.
1	"	1	......	"	Penitentiary.
4	"	3	1	Intoxication	Fine.
1	"	1	......	Petit larceny	Fine and imprisonment.
1	"	1	......	"	House of refuge.
1	"	1	......	"	Penitentiary.
1	"	1	......	Assault and battery	Fine.
2	"	2	......	" "	Fine and imprisonment.
7	"	7	......	Intoxication	Fine.
1	"	1	......	Petit larceny	Fine.
1	"	1	......	"	House of refuge.
1	"	1	......	"	Jail.
4	October.	4	......	Assault and battery	Jail.
2	"	2	......	" "	Penitentiary.
1	"	1	......	" "	Fine.
3	"	3	......	Intoxication	Fine.
1	"	......	1	Malicious mischief	Jail.
1	"	1	......	Petit larceny	House of refuge.
1	"	1	......	"	Fine.

COUNTY OF OTSEGO.

No. of convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1881.				
3	November.	3	......	Intoxication	Fine.
1	"	1	......	Petit larceny	Fine.
1	"	1	......	"	Fine and imprisonment.
1	"	1	......	"	Penitentiary.
	1882.				
3	January.	3	......	Assault and battery	Fine.
2	February.	2	......	Intoxication	Fine.
1	April.	1	......	Assault and battery	Fine.
2	"	2	......	Intoxication	Fine.
1	May.	1	......	Assault and battery	Fine.
1	"	1	......	Disorderly person	Jail.
1	June.	1	......	False representations	Fine.
1	July.	1	......	Assault and battery	Fine.
6	"	5	1	Intoxication	Fine.
4	August.	4	......	"	Fine.
1	September.	1	......	"	Fine.
1	"	1	......	Petit larceny	House of refuge.
1	October.	1	......	Assault and battery	Fine.
3	"	3	......	Intoxication	Fine.
1	"	1	......	Petit larceny	House of refuge.

Table K. — (Continued).

COUNTY OF PUTNAM.

No. of convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1881.				
2	November.	2	......	Disorderly conduct	Fine.
6	"	6	......	Intoxication	Fine.
1	"	1	......	Petit larceny	Penitentiary.
1	December.	1	......	Assault and battery	Fine.
3	"	3	......	Intoxication	Fine.
	1882.				
5	January.	5	.....	"	Fine.
1	"	1	....	Petit larceny	Jail.
1	February.	1	......	Assault and battery	Jail.
4	"	2	2	Intoxication	Fine.
1	"	1	......	Petit larceny	Jail.
2	March.	2	......	Intoxication	Fine.
2	April.	2	......	Assault and battery	Jail.
6	"	6	......	Intoxication	Fine.
1	May.	1	......	"	Fine.
6	June.	5	1	"	Fine.
3	"	3	.....	Tramp	Penitentiary.
1	July.	1	......	Assault and battery	Jail.
1	"	1	......	" "	Fine.
1	"	1	......	Intoxication	Fine.
2	August.	2	......	Assault and battery	Jail.
3	"	3	.....	Intoxication	Fine.
2	September.	2	......	Assault and battery	Jail.
3	"	3	......	Intoxication	Fine.
1	October.	1	.....	"	Fine.

COUNTY OF QUEENS.

No. of convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1881.				
1	November.	1	......	Assault and battery	Fine.
3	"	3	......	" "	Jail.
1	"	......	1	Breach of peace	Jail.
3	"	1	2	Disorderly conduct	Jail.
5	"	2	3	Drunk and disorderly	Jail.
2	"	1	1	" "	Fine.
1	"	1	......	Malicious mischief	Jail.
3	"	2	1	Petit larceny	Jail.
3	"	......	3	Receiving stolen goods	Fine.
1	"	1	......	Violating excise law	Fine.
2	December.	2	......	Assault and battery	Fine.
2	"	2	......	Drunk and disorderly	Jail.
1	"	1	......	Disorderly person	Jail.
2	"	2	......	Intoxication	Jail.
1	"	1	......	"	Fine.
1	"	1	......	Malicious mischief	Fine.
1	"	1	......	" "	Jail.
1	"	1	......	" trespass	Fine.
5	"	5	......	Petit larceny	Fine.
1	"	......	1	Resisting officer	Jail.
1	"	1	.....	Tramp	Penitentiary.
	1882				
1	January.	1	......	Assault and battery	Penitentiary.
6	"	6	......	" "	Fine.
1	"	1	.....	" "	Fine and imprisonment.
1	"	1	......	Cruelty to animals	Fine.
1	"	1	......	Drunk and disorderly	Fine.
6	"	6	......	" "	Jail.
1	"	1	......	" "	Penitentiary.
1	"	1	......	Disorderly child	House of refuge.
1	"	1	......	" conduct	Jail.

Table K. — County of Queens — (Continued).

No. of convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1882.				
2	January.	2		Intoxication	Jail.
2	"	2		"	Fine.
2	"	2		Malicious mischief	Fine.
1	"	1		" "	House of refuge.
2	"	2		Petit larceny	Jail.
6	"	6		"	Fine.
2	"	2		Vagrancy	Penitentiary.
3	"	2	1	"	Jail.
1	February.	1		Assault	Jail.
4	"	4		" and battery	Fine.
1	"	1		Drunk and disorderly	Fine.
3	"	2	1	" "	Jail.
1	"		1	Disorderly person	Jail.
2	"	1	1	" conduct	Jail.
2	"		2	Intoxication	Jail.
2	"	2		"	Fine.
2	"	2		Petit larceny	Jail.
1	"	1		"	Penitentiary.
1	"	1		Tramp	Penitentiary.
1	"	1		Vagrancy	Jail.
8	March.	8		Assault and battery	Fine.
3	"	3		Disorderly conduct	Fine.
2	"	2		" person	Jail.
1	"	1		" "	Penitentiary.
3	"	2	1	Drunk and disorderly	Jail.
1	"		1	Intoxication	Jail.
4	"	4		Malicious mischief	Fine.
2	"	2		Petit larceny	Fine.
2	"	2		Tramp	Penitentiary.
1	"	1		Vrgrancy	House of refuge.
1	"	1		"	Jail.
1	"	1		Violating excise law	Fine.
4	April.	4		Assault and battery	Fine.
1	"	1		" "	Bonds.
1	"	1		Bastardy	Bonds.
3	"	3		Disorderly conduct	Jail.
1	"	1		" "	Fine.
1	"	1		Drunk and disorderly	Jail.
4	"	2	2	Intoxication	Jail.
1	"	1		Petit larceny	Jail.
1	"	1		"	Fine.
1	"	1		Threats	Bonds.
9	"	9		Violating Sunday law	Fine.
1	May.	1		Assault and battery	Penitentiary.
3	"	3		Disorderly conduct	Jail.
6	"	2	4	Drunk and disorderly	Jail.
2	"	2		" "	Fine.
2	"	2		Embezzlement	Fine.
2	"	2		Intoxication	Fine.
1	"	1		"	Jail.
2	"	2		Vagrancy	Jail.
1	"	1		Violating hack ordinance.	Fine.
1	"		1	" village ordinance.	Fine.
25	"	25		" Sunday law	Fine.
7	June.	4	3	Assault and battery	Fine.
1	"	1		" "	Jail.
1	"	1		" "	Penitentiary.
1	"		1	Breach of peace	Jail.
5	"	4	1	Drunk and disorderly	Jail.
6	"	5	1	" "	Fine.
1	"	1		Disorderly conduct	Fine.
3	"	3		" "	Jail.

Table K.— County of Queens — (Continued).

No. of convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1882.				
1	June.	1	......	Disorderly person	Bonds.
1	“	1	......	Intoxication	Jail.
2	“	2	......	“	Fine.
2	“	2	......	Indecent exposure	Fine.
1	“	1	......	Petit larceny	House of refuge.
1	“	1	......	“	Jail.
1	“	1	......	“	Penitentiary.
1	“	1	......	Vagrancy	Penitentiary.
2	“	2	......	“	Poor-house.
9	“	9	......	Violating Sunday law	Fine.
3	July.	3	......	Assault	Fine.
13	“	11	2	“ and battery	Fine.
4	“	4	......	“ “	Jail.
1	“	1	......	“ “	Penitentiary.
1	“	1	......	Breach of peace	Fine.
5	“	5	......	Disorderly conduct	Fine.
1	“	......	1	“ “	Jail.
2	“	2	......	“ person	Jail.
1	“	1	......	“ “	Bonds.
4	“	3	1	Intoxication	Fine.
3	“	1	2	“	Jail.
1	“	1	......	Indecent exposure	Jail.
1	“	1	......	Malicious mischief	Fine.
1	“	1	......	Petit larceny	Fine.
7	“	7	......	“	Penitentiary.
1	“	1	......	“	House of refuge.
1	“	1	......	Vagrancy	Penitentiary.
1	“	1	......	“	Jail.
26	“	26	......	Violating Sunday law	Fine.
12	August.	12	......	Assault and battery	Fine.
1	“	1	......	“ “	Bonds.
1	“	1	......	“ “	Jail.
6	“	2	4	Drunk and disorderly	Jail.
7	“	6	1	“ “	Fine.
7	“	4	3	Disorderly conduct	Fine.
1	“	1	......	“ person	Jail.
1	“	1	......	Embezzlement	Fine.
5	“	5	......	Intoxication	Fine.
1	“	......	1	“	Jail.
1	“	1	......	Indecent exposure	Fine.
5	“	5	......	Malicious mischief	Fine.
4	“	4	.....	Petit larceny	Fine.
5	“	5	......	“	Jail.
4	“	4	......	“	House of refuge.
1	“	1	......	Tramp	Penitentiary.
1	“	1	......	Violating excise law	Fine.
3	“	3	......	“ Sunday law	Fine.
12	September.	12	......	Assault and battery	Fine.
1	“	1	......	“ “	Bonds.
1	“	1	......	Carrying concealed weapons.	Bonds.
3	“	3	......	Cruelty to animals	Bonds.
1	“	......	1	Drunk and disorderly	Bonds.
5	“	1	4	“ “	Jail.
2	“	2	......	Disorderly conduct	Jail.
3	“	1	2	Intoxication	Fine.
1	“	1	......	Indecent exposure	Fine.
5	“	4	1	Petit larceny	Fine.
1	“	1	......	“	Penitentiary.
2	“	2	......	“	Jail.
1	“	1	......	Violating Sunday law	Fine.
2	“	2	......	Vagrancy	Jail.
2	“	2	......	Willful trespass	Fine.
2	October.	2	......	Assault and battery	Fine.
1	“	1	......	“ “	Penitentiary.
1	“	1	......	Contempt	Fine.

Table K.— County of Queens — (Continued).

No. of convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1882.				
2	October.	1	1	Disorderly person	Fine.
1	"	......	1	"	Penitentiary.
2	"	1	1	"	Jail.
2	"	......	2	Drunk and disorderly	Jail.
1	"	......	1	" "	Penitentiary.
2	"	......	2	Disorderly conduct	Jail.
6	"	6	......	" "	Fine.
3	"	2	1	Intoxication	Jail.
1	"	1	......	Petit larceny	Jail.
1	"	1	......	"	Fine.
2	"	1	1	Vagrancy	Poor-house.
1	"	1	......	Violating game laws	Fine.

COUNTY OF RENSSELAER.

No. of convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1881.				
5	November.	5	......	Assault and battery	Jail.
1	"	1	......	" "	House of refuge.
2	"	2	......	" "	Suspended.
12	"	10	2	" "	Fine.
1	"	1	......	Abandonment	Not stated.
5	"	5	......	Disorderly	Fine.
1	"	1	......	"	Bonded.
2	"	2	......	"	Jail.
8	"	8	......	"	Suspended.
10	"	9	1	Disturbing peace	Suspended.
1	"	1	......	"	Bonded.
16	"	16	......	"	Fine.
1	"	1	......	Habitual drunkard	Not stated.
25	"	23	2	Intoxication	Fine.
5	"	2	3	"	Jail.
28	"	24	4	"	Suspended.
1	"	1	......	Malicious mischief	Suspended.
1	"	1	......	"	Fine.
2	"	2	......	Petit larceny	Fine.
6	"	6	......	"	Jail.
3	"	3	......	"	Suspended.
9	"	4	5	Vagrancy	Orphan asylum.
3	"	3	......	"	Not stated.
2	"	2	......	"	House of refuge.
2	"	2	......	"	Jail.
1	"	1	......	Violation state law	Fine.
12	December.	12	......	Assault and battery	Fine.
2	"	2	......	" "	Jail.
1	"	1	......	" "	Suspended.
8	"	7	1	Disorderly	Suspended.
7	"	6	1	"	Jail.
20	"	15	5	"	Fine.
3	"	2	1	Destitute children	Orphan asylum.
2	"	2	......	Habitual drunkard	Jail.
1	"	......	1	Intoxication	Jail.
26	"	22	4	"	Suspended.
16	"	14	2	"	Fine.
1	"	1	......	Malicious trespass	Suspended.
2	"	2	......	Petit larceny	Suspended.
4	"	4	......	"	Jail.
2	"	2	......	"	House of refuge.
2	"	1	1	"	Fine.
1	"	1	......	Truancy	House of refuge.
4	"	4	......	Vagrancy	Jail.
1	"	1	......	"	Suspended.

Table K. — Caunty of Rensselaer — (Continued).

No. of Convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1882.				
10	January.	9	1	Assault and battery	Suspended.
13	"	13	......	" "	Fine.
23	"	20	3	Disorderly	Fine.
6	"	5	1	"	Jail.
10	"	9	1	"	Suspended.
19	"	14	5	Intoxication	Suspended.
16	"	8	8	"	Fine.
2	"	2	......	Petit larceny	Fine.
3	"	3	......	"	Jail.
4	"	4	.....	Vagrancy	Jail.
3	"	3	......	"	Suspended.
7	February.	6	1	Assault and battery	Suspended.
3	"	3	......	" "	Jail.
4	"	4	......	" "	Fine.
16	"	15	1	Disorderly	Fine.
4	"	4	......	"	Jail.
3	"	5	3	"	Suspended.
1	"	1	......	Indecent exposure	Jail.
16	"	15	1	Intoxication.	Fine.
28	"	27	1	"	Suspended.
1	"	1	.....	Petit larceny	House of refuge.
1	"	1	......	"	Jail.
2	"	2	......	"	Fine.
8	March.	8	......	Assault and battery	Fine.
4	"	4	......	" "	Jail.
1	"	1	......	" "	Suspended.
7	"	7	......	Disorderly	Suspended.
1	"	......	1	"	Jail.
20	"	20	......	"	Fine.
27	"	24	3	Intoxication	Fine.
1	"	......	1	"	Jail.
24	"	22	2	"	Suspended.
1	"	1	......	Indecent exposure	Fine.
6	"	6	......	Petit larceny	Fine.
2	"	2	......	"	Jail.
2	"	2	......	"	Suspended.
1	April.	1	......	Affray	Jail.
3	"	3	......	"	Fine.
8	"	8	.....	Assault and battery	Fine.
3	"	3	......	" "	Jail.
4	"	2	2	" "	Suspended.
3	"	2	1	Disorderly	Suspended.
4	"	4	......	"	Jail.
7	"	7	......	"	Fine.
22	"	19	3	Intoxication	Suspended.
5	"	2	3	"	Jail.
27	"	23	4	"	Fine.
3	"	2	1	Petit larceny	Fine.
2	"	2	......	"	Jail.
1	"	......	1	"	Suspended.
2	"	2	......	Trespass	Suspended.
5	"	5	......	Violation city ordinance	Fine.
1	May.	1	......	Affray	Fine.
8	"	8	......	Assault and battery	Fine.
1	"	1	.....	" "	Jail.
1	"	1	....	" "	House of refuge.
4	"	4	......	" "	Suspended.
3	"	3	......	Disorderly	Suspended.
2	"	2	.....	"	House of refuge.
5	"	4	1	"	Jail.
20	"	19	1	"	Fine.
18	"	14	4	Intoxication	Fine.
6	"	5	1	"	Jail.
17	"	16	1	"	Suspended.

Table K. — County of Rensselaer — (Continued).

No. of convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1882.				
7	May.	3	4	Malicious mischief	Suspended.
1	“	1	......	“	Jail.
3	“	3	......	“	Fine.
5	“	5	......	Petit larceny	Fine.
2	“	2	......	“	House of refuge.
4	“	4	......	“	Jail.
2	“	2	......	“	Suspended.
1	“	......	1	Vagrancy	House of refuge.
1	“	......	1	“	Poor-house.
2	“	2	......	“	Jail.
2	June.	2	......	Affray	Fine.
2	“	2	......	“	Jail.
6	“	6	......	Assault and battery	Jail.
1	“	1	......	“ “	Suspended.
13	“	12	1	“ “	Fine.
31	“	27	4	Disorderly	Fine.
9	“	9	......	“	Jail.
9	“	5	4	“	Suspended.
1	“	......	1	Habitual drunkard	Jail.
3	“	1	2	Intoxication	Jail.
22	“	19	3	“	Suspended.
22	“	16	6	“	Fine.
2	“	2	......	Petit larceny	Fine.
3	“	3	......	“	House of refuge.
3	“	2	1	Vagrancy	House of refuge.
2	“	2	......	“	Fine.
1	July.	1	......	Affray	Fine.
1	“	1	......	“	Suspended.
3	“	......	3	Assault and battery	Suspended.
3	“	3	......	“ “	Jail.
7	“	7	......	“ “	Fine.
15	“	14	1	Disorderly	Fine.
3	“	1	2	“	Jail.
12	“	7	5	“	Suspended.
2	“	......	2	Habitual drunkard	Jail.
9	“	4	5	Intoxication	Jail.
33	“	29	4	“	Suspended.
17	“	15	2	“	Fine.
5	“	5	......	Petit larceny	Fine.
2	“	2	......	“	Jail.
1	“	1	......	Vagrancy	Jail.
2	“	2	......	“	Fine.
14	August.	11	3	Assault and battery	Fine.
4	“	4	......	“ “	Jail.
6	“	6	......	“ “	Suspended.
28	“	23	5	Disorderly	Suspended.
8	“	5	3	“	Jail.
34	“	33	1	“	Fine.
17	“	17	......	Intoxication	Fine.
8	“	7	1	“	Jail.
27	“	24	3	“	Suspended.
1	“	1	......	Not supporting family	Suspended.
1	“	1	......	Petit larceny	Suspended.
3	“	3	......	“	Jail.
1	“	1	......	“	House of refuge.
3	“	3	......	“	Fine.
11	“	11	......	Vagrancy	Jail.

Table K. — (Continued).

COUNTY OF SARATOGA.

No. of convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1881.				
2	November.	2	......	Assault and battery	Fine.
5	"	5	.....	Intoxication	Fine.
2	"	2	......	Petit larceny	Fine.
2	"	2	......	"	Jail.
2	"	1	1	"	Penitentiary.
1	December.	1	......	Assault and battery	Fine.
4	"	4	......	Disorderly	Fine.
4	"	2	2	Intoxication	Fine.
4	"	4	......	Petit larceny	Jail.
10	"	10	......	Vagrancy	Jail.
	1882.				
4	January.	4	......	Assault and battery	Fine.
6	"	5	1	Intoxication	Fine.
1	"	1	......	Petit larceny	Jail.
1	"	1	......	"	Penitentiary.
1	February.	1	......	Assault and battery	Penitentiary.
2	"	1	1	Disorderly	Fine.
6	"	6	......	Intoxication	Fine.
1	"	1	......	Trespass on railroad	Fine.
3	"	2	1	Vagrancy	Jail.
9	March.	9	......	Intoxication	Fine.
1	"	1	......	Petit larceny	Penitentiary.
6	"	5	1	Vagrancy	Jail.
1	April.	1	......	Assault and battery	Fine.
1	"	1	......	Vagrancy	Jail.
20	"	17	3	Intoxication	Fine.
1	May.	1	......	Assault and battery	Fine.
15	"	11	4	Intoxication	Fine.
1	"	1	......	Malicious mischief	Fine.
1	"	1	.....	"	Jail.
1	"	1	......	"	Penitentiary.
1	"	1	......	Petit larceny	Fine.
2	"	2	......	Vagrancy	Adjudged.
2	June.	2	......	Assault	Fine.
7	"	7	......	Intoxication	Fine.
1	July.	1	......	Assault and battery	Fine.
1	"	1	......	Cruelty to animals	Fine.
35	"	28	7	Intoxication	Fine.
1	"	1	......	Petit larceny	Jail.
1	"	1	......	"	Penitentiary.
5	"	5	......	Vagrancy	Adjudged.
4	August.	4	......	Assault and battery	Fine.
1	"	......	1	Disorderly	Adjudged.
29	"	25	4	Intoxication	Fine.
4	"	4	......	Petit larceny	Penitentiary.
2	September.	2	......	Assault and battery	Fine.
14	"	11	3	Intoxication	Fine.
2	"	2	......	Vagrancy	Jail.
17	October.	17	......	Intoxication	Fine.
1	"	1	......	Malicious mischief	Penitentiary.
1	"	1	......	Petit larceny	Penitentiary.
1	"	1	......	"	Jail.
3	"	2	1	"	Fine.
3	"	3	......	Vagrancy	Adjudged.

Table K. — (Continued).

COUNTY OF SCHOHARIE.

No. of convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1881.				
1	November.	......	1	Disorderly child	House of refuge.
2	December.	2	......	Intoxication	Fine.
2	"	2	......	Petit larceny	Jail.
3	"	3	......	Vagrancy	Jail.
	1882.				
2	January.	2	......	Petit larceny	Jail.
2	February.	2	......	Intoxication	Fine.
2	March.	2	......	Petit larceny	Penitentiary.
2	"	2	......	Vagrancy	Jail.
1	May.	1	......	Assault and battery	Jail.
1	"	1	....	Petit larceny	Jail.
1	"	1	.....	Cruelty to animals	Fine.
4	August.	4	......	Intoxication	Fine.
5	September.	5	.....	"	Fine.
1	October.	1	......	"	Fine.

COUNTY OF SCHUYLER.

	1881.				
2	November.	2	......	Assault and battery	Fine.
1	"	1	......	Intoxication	Fine.
1	"	1	......	"	Penitentiary.
1	"	1	......	Petit larceny	Fine.
4	December.	4	......	Intoxication	Fine.
	1882.				
1	January.	1	......	"	Fine.
1	"	1	......	Petit larceny	Penitentiary.
1	"	1	......	Vagrancy	Jail.
4	"	4	......	"	Adjudged vagrants.
6	February.	6	......	"	Adjudged vagrants.
3	"	2	1	Intoxication	Fine.
1	March.	1	......	Petit larceny	Fine.
1	May.	......	1	Intoxication	Penitentiary.
1	"	1	......	Petit larceny	Penitentiary.
2	"	2	......	Vagrancy	Jail.
2	June.	2	......	Intoxication	Fine.
1	"	1	......	"	Jail.
4	July.	4	......	"	Fine.
1	August.	1	......	Assault	Fine.
1	"	1	......	Intoxication	Jail.

COUNTY OF SENECA.

	1881.				
1	November.	1	......	Petit larceny	Penitentiary.
	1882.				
2	January.	2	......	"	Penitentiary.
2	"	2	......	"	Fine.
1	"	1	......	Intoxication	Fine.
2	February.	2	......	"	Fine.
2	May.	2	......	"	Fine.
2	June.	2	.....	"	Fine.
1	August.	1	......	"	Fine.
2	September.	2	......	"	Fine.

Table K. — (Continued).

COUNTY OF STEUBEN.

No. of convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1881.				
1	November.	1	......	Petit larceny	Fine.
1	December.	1	......	Disturbing peace	Fine.
2	“	2	......	Intoxication	Fine.
2	“	2	......	Petit larceny	House of refuge.
	1882.				
2	January.	2	......	Assault and battery	Fine.
16	“	16	......	Intoxication	Fine.
1	“	1	......	Petit larceny	House of refuge.
2	“	2	......	Trespass on railroad	Jail.
1	“	1	......	“ “	Fine.
1	“	1	......	Vagrancy	Jail.
1	February.	1	......	Assault and battery	Fine.
18	“	18	......	Intoxication	Fine.
1	“	1	......	Vagrancy	House of refuge.
3	“	3	......	“	Penitentiary.
1	March.	1	......	Assault and battery	Fine.
31	“	31	......	Intoxication	Fine.
1	“	1	......	Trespass on railroad	Fine.
1	“	1	......	“ “	Jail.
4	“	4	......	Vagrancy	Penitentiary.
1	April.	1	......	Assault and battery	Penitentiary.
3	“	2	1	“ “	Fine.
1	“	1	......	Disorderly conduct	Fine.
29	“	29	......	Intoxication	Fine.
1	“	1	......	Petit larceny	House of refuge.
1	“	1	......	“	Penitentiary.
1	“	1	......	Vagrants	Penitentiary.
1	“	1	......	Trespass on railroad	Jail.
3	May.	3	......	Assault and battery	Fine.
1	“	1	......	“ “	Penitentiary.
1	“	1	......	Disorderly	Fine.
41	“	41	......	Intoxication	Fine.
3	“	3	......	Petit larceny	Fine.
1	June.	1	......	Constructive larceny	Jail.
29	“	29	......	Intoxication	Jail.
1	“	1	......	Petit larceny	House of refuge.
1	“	1	......	Trespass on railroad	Jail.
6	“	6	......	Vagrancy	Penitentiary.
1	July.	1	......	Assault and battery	Penitentiary.
1	“	1	......	“ “	Suspended.
8	“	8	......	“ “	Fine.
1	“	1	......	Cruelty to animals	Fine.
59	“	59	......	Intoxication	Fine.
1	“	1	......	“	Suspended.
1	“	1	......	Petit larceny	House of refuge.
1	“	1	......	“	Jail.
1	“	1	......	“	Fine.
2	“	2	......	Trespass on railroad	Jail.
1	“	1	......	Violating excise law	Suspended.
2	“	2	......	“ “	Fine.
10	“	10	......	Vagrancy	Penitentiary.
2	August.	2	......	Assault and battery	Fine.
7	“	7	......	Intoxication	Fine.
3	“	3	......	“	Suspended.
1	October.	1	......	“	Suspended.
82	“	80	2	“	Fine.
1	“	1	......	Petit larceny	Fine.

Table K.— (Continued).

COUNTY OF ST. LAWRENCE.

No. of Convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1881.				
1	November.	1	......	Assault and battery	Fine.
1	"	1	......	Disorderly	Fine.
4	December.	3	1	Assault and battery	Fine.
1	"	1	......	" "	Jail.
2	"	2	......	Petit larceny	Fine.
1	"	1	......	"	Suspended.
10	"	10	......	Intoxication.	Fine.
1	"	1	......	Violating game law	Fine.
	1882.				
3	January.	3	......	Assault and battery	Fine.
1	"	1	......	Disorderly	Bonded.
1	"	1	......	Intoxication	Fine.
1	"	1	......	Petit larceny	Fine.
2	"	2	......	"	Jail.
1	"	1	......	Violating game law.	Fine.
3	February.	3	......	Assault and battery	Fine.
2	"	2	......	Intoxication	Fine.
1	"	1	......	Petit larceny	Jail.
4	March.	4	......	Intoxication	Fine.
2	"	2	......	Malicious mischief	Fine.
3	April.	3	......	Gambling	Fine.
4	"	4	......	Intoxication	Fine.
6	May.	6	......	"	Fine.
1	June.	1	......	Assault and battery	Penitentiary.
1	"	1	......	Intoxication.	Penitentiary.
6	"	6	......	"	Fine.
1	July.	1	......	Assault and battery	Fine.
1	"	......	1	Intoxication	Jail.
4	"	4	......	"	Fine.
1	"	1	......	Vagrancy	Adjudged.
1	August.	1	......	Assault and battery	Penitentiary.
1	"	1	......	" "	Jail.
2	"	2	......	" "	Fine.
6	"	6	......	Intoxication	Fine.
3	"	3	......	Petit larceny	Fine.
1	September.	1	......	Assault and battery	Penitentiary.
1	"	1	......	Disorderly conduct	Fine.
5	"	5	......	Intoxication	Fine.

COUNTY OF SUFFOLK.

	1881.				
2	November.	2	......	Assault and battery	Fine.
2	"	1	1	Disorderly children	House of refuge.
1	December.	1	......	Intoxication.	Bonded.
2	"	2	......	"	Fine.
	1882.				
2	January.	2	......	Disturbing religious meeting	Fine.
1	"	1	......	Disorderly child	House of refuge.
3	"	3	......	Petit larceny	Fine.
1	"	1	......	Vagrancy	Poor-house.
1	February.	1	......	"	Poor-house.
1	"	1	......	Assault and battery	Fine.
6	March.	6	......	" "	Fine.
1	"	1	......	" "	Jail.
2	"	2	......	" "	Bonded.
2	"	2	......	Intoxication	Jail.
2	"	2	......	Petit larceny	Fine.

Table K. — County of Suffolk — (Continued).

No. of convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1882.				
6	April.	6		Malicious mischief.	Fine.
1	“	1	......	Petit larceny	Jail.
1	May	1	......	Assault and battery	Jail.
1	“	1	......	“ “	Fine.
2	“	2	......	Intoxication	Fine.
1	“	1	......	Petit larceny	Jail.
4	June.	4	......	Assault and battery	Fine.
1	“	1	......	Cruelty to animals	Fine.
1	“	1	......	Malicious mischief	Fine.
1	“	1	......	Petit larceny	Fine.
4	July.	4	......	Assault and battery	Fine.
2	“	2	......	Petit larceny	House of refuge.
2	“	2	......	Vagrancy	House of refuge.
2	August.	2	......	Assault and battery	Fine.
2	“	2	......	Petit larceny	Fine.
3	“	3	......	“	Jail.
1	“	1	......	“	House of refuge.
1	September.	1	......	Assault and battery	Fine.
1	“	1	......	Disorderly person	Fine.
3	“	3	......	Petit larceny	Jail.
3	October.	3	......	Assault and battery	Fine.
2	“	2	......	Intoxication.	Fine.
1	“	1	......	Petit larceny	Jail.

COUNTY OF SULLIVAN.

No. of convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1881.				
1	December.	1	.....	Disorderly	Bonded.
1	“	1	......	Assault and battery	Fine.
	1882.				
1	February.	1	......	“ “	Fine.
1	March.	1	......	Disorderly	Bonded.

COUNTY OF TIOGA.

No. of convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1881.				
24	November.	24	......	Intoxication.	Fine.
2	“	2	......	Petit larceny	Fine and imprisonment.
5	“	5	......	Trespass on railroad	Fine.
1	December.	1	......	Cruelty to animals	Fine and imprisonment.
9	“	9	......	Intoxication.	Fine.
1	“	1	.....	Petit larceny	Penitentiary.
	1882.				
5	January.	5	......	Intoxication.	Fine.
10	“	10	.....	Vagrancy	Adjudged.
4	February.	4	......	Assault and battery	Fine.
6	“	6	......	Intoxication.	Fine.
8	“	9	......	Vagrancy	Adjudged.
3	“	3	......	“	Penitentiary.
1	March.	1	......	Assault and battery	Penitentiary.
2	“	2	......	“ “	Fine.
9	“	8	1	Intoxicatien.	Fine.
1	“	1	......	Petit larceny	Fine.
7	April.	7	......	Intoxication.	Fine.
9	May.	9	......	“	Fine.
1	“	1	......	Petit larceny	Fine.
1	June.	1	......	“	Fine and imprisonment.
6	“	6	......	Intoxication.	Fine.

Table K. — County of Tioga — (Continued).

No. of convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1882.				
1	July.	1	......	Assault and battery	Fine.
1	“	1	......	Indecent assault	Fine.
2	“	2	......	Intoxication	Fine.
2	August.	2	......	Assault and battery	Fine.
1	“	1	......	Cruelty to animals.	Fine.
1	“	1	....	Disorderly person	Adjudged.
9	“	6	3	Intoxication.	Fine.
1	“	1	......	Petit larceny	Penitentiary.
1	“	1	......	Secreting mortgaged prop'ty..	Fine.
1	“	1	.. .	Trespass on railroad	Fine.
1	September.	1	. ....	Assault and battery	Fine.
1	“	1	. ....	“ “	Fine and imprisonment.
1	“	1	.....	Disorderly person	Adjudged.
1	“	1	......	Intoxication.	Fine.
1	“	1	......	Petit larceny	Fine.
1	“	1	....	“	Fine and imprisonment.
1	“	1	......	“	House of refuge.
2	“	.... .	2	Vagrancy	Adjudged.
4	“	4	......	“	Penitentiary.

COUNTY OF TOMPKINS.

No. of convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1881.				
1	November.	1	......	Assault and battery	Fine.
6	“	6	......	Disorderly person	Fine.
1	“	1	......	“	Suspended.
3	“	3	......	“	Jail.
3	“	3	.... .	Intoxication.	Jail.
7	“	7	......	“	Fine.
1	“	1	.. ...	Petit larceny	Penitentiary.
1	“	1	......	“	Jail.
1	December.	1	......	Intoxication.	Jail.
7	“	7	......	“	Fine.
	1882.				
2	January.	2	......	Assault and battery	Fine.
5	“	5	......	Intoxication.	Fine.
2	“	2	......	“	Jail.
1	February.	1	......	Assault and battery	Fine.
2	“	2	......	Intoxication.	Fine.
5	“	5	......	“	Jail.
1	“	1	......	Petit larceny	Jail.
1	March.	1	......	Assault and battery	Jail.
3	“	3	......	Intoxication.	Jail.
4	“	4	......	“	Fine.
1	“	1	.. ..	Vagrancy	Jail.
2	April.	2	......	Assault and battery.	Penitentiary.
1	“	1	......	Intoxication.	Penitentiary.
1	“	1	......	“	Fine.
1	“	1	......	“	Jail.
1	“	1	......	Petit larceny	Jail.
1	May.	1	......	Disorderly	Jail.
1	“	1	......	“	Fine.
9	“	8	1	Intoxication.	Fine.
1	“	1	......	Petit larceny	Jail.
2	June.	2	...	Disorderly	Fine.
26	“	26	.....	Intoxication.	Fine.
2	“	2	......	Petit larceny	Penitentiary
1	July.	1	.....	Intoxication	Penitentiary
1	“	1	..	“	Jail.
9	“	9	.	“	Fine.

Table K. — County of Tompkins — (Continued).

No. of convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1882.				
1	August.	1	......	Assault and battery..........	Fine.
8	"	8	......	Intoxication.	Fine.
1	"	1	......	Petit larceny	Penitentiary.
5	September.	5	.....	Intoxication	Fine.

COUNTY OF ULSTER.

No. of convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1882.				
2	May.	2	. ....	Assault and battery....... ..	Fine.
3	"	1	2	Vagrancy	Penitentiary.
2	"	1	1	"	House of refuge.
4	June.	3	1	Assault and battery..........	Penitentiary.
1	"	1	......	" "	Fine.
1	July.	1	. ....	" "	Penitentiary.
1	"	1	......	Disorderly person	Adjudged.
1	"	1	......	Frightening horses....... ...	Fine.
1	"	1	......	Intoxication.	Fine.
2	"	2	.....	Vagrancy	Penitentiary.
1	August.	1	......	Petit larceny	Jail.

COUNTY OF WARREN.

No. of convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1881.				
1	December.	1	......	Assault and battery..........	Fine.
3	"	3	......	Intoxication..................	Fine.
1	"	1	......	Petit larceny.................	Penitentiary.
1	"	1	......	Vagrancy	Adjudged.
	1882.				
1	January.	1	......	"	Adjudged.
3	"	3	......	Intoxication	Fine.
1	February.	1	......	Petit larceny	Jail.
4	April.	4	......	Intoxication	Fine.
1	"	1	.....	"	Suspended.
1	"	1	.....	Vagrancy	Adjudged.
2	"	......	2	"	House of refuge.
2	June.	2	......	Intoxication	Fine.
3	"	3	......	"	Suspended.
3	"	3	......	Violating excise law..	Fine.
4	July.	4	......	" "	Fine.
1	"	1	......	Assault and battery......... .	Penitentiary.
2	"	2	......	" "	Fine.
2	"	2	......	Intoxication.................	Fine.
4	"	4	......	"	Suspended.
1	"	1	......	Petit larceny	Fine.
2	"	2	......	Vagrancy.........................	Penitentiary.
3	August.	2	1	Intoxication......	Suspended.
12	"	12	......	"	Fine.
1	"	1	......	Assault and battery	Fine.
1	"	......	1	Violating excise law	Fine.
1	October.	1	......	" "	Fine.
2	"	2	......	Intoxication.......	Fine.

COUNTY OF WASHINGTON.

No. of convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1881.				
9	December.	9	....	Intoxication	Fine.
2	"	2	......	Vagrancy.....................	Adjudged.
1	"	1	......	Violating excise law	Fine.
	1882.				
1	January.	1	......	Intoxication..	Fine.
1	"	......	1	Petit larceny	Penitentiary.
2	"	2	......	"	House of refuge.
1	February.	1	......	Disorderly person.......	Bonded.
2	"	2	......	Intoxication	Fine.
3	"	3	......	Trespass on railroad	Fine.

Table K.—(Continued).

COUNTY OF WAYNE.

No. of convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1881.				
1	November.	......	1	Assault and battery	Fine.
5	"	5	......	Intoxication	Fine.
1	"	1	......	Vagrancy	Adjudged.
1	"	1	......	"	Penitentiary.
2	December.	2	......	Assault and battery	Fine.
1	"	1	......	Petit larceny	Fine.
	1882.				
9	January.	9	......	Intoxication.	Fine.
1	"	1	......	"	Penitentiary.
1	"	1	......	Petit larceny	Fine.
1	"	1	......	"	Fine and imprisonment.
1	"	1	......	"	Jail.
3	"	3	......	Vagrancy.	Adjudged.
1	February.	1	......	Assault and battery	Fine.
2	"	2	......	Intoxication	Fine.
2	"	2	.....	Petit larceny	Fine.
2	March.	2	......	Assault and battery	Fine.
1	"	1	.....	Contempt	Fine and jail.
1	"	1	......	Cock fighting	Fine.
4	"	4	......	Intoxication	Fine.
1	"	1	......	Petit larceny	Jail.
1	"	1	......	Vagrancy	Jail.
1	April.	1	......	Assault and battery	Fine.
3	"	3	......	Intoxication	Fine.
1	"	1	.....	"	Penitentiary.
2	"	2	......	Petit larceny	Jail.
1	"	1	......	Vagrancy	Jail.
1	May.	1	......	Assault and battery	Fine.
7	"	7	......	Intoxication	Fine.
1	"	1	......	"	Jail.
4	June.	4	......	"	Fine.
1	"	1	......	Vagrancy	Jail.
1	September.	1	......	Assault and battery	Fine.
18	"	18	......	Intoxication	Fine.
2	"	2	......	Petit larceny	Jail.
1	"	1	......	"	House of refuge.
2	"	2	......	Vagrancy	Poor-house.

COUNTY OF WESTCHESTER.

No. of convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1881.				
1	November.	......	1	Abandonment	Jail.
1	"	1	......	Assault and battery	R. C. protectory.
1	"	1	......	" "	Penitentiary.
1	"	1	......	" "	Suspended.
1	"	......	1	Disorderly	Fine.
9	"	8	1	Intoxication	Fine.
3	"	3	......	"	Jail.
1	"	......	1	"	Penitentiary.
1	"	1	......	Petit larceny	Penitentiary.
2	"	2	......	Truancy	Jail.
7	"	7	......	Vagrancy	Penitentiary.
11	"	10	1	"	Jail.
4	December.	4	......	Assault and battery	Fine.
1	"	1	......	" "	Penitentiary.
2	"	2	......	Disorderly	Jail.
2	"	2	......	Intoxication	Jail.
4	"	3	1	"	Penitentiary.
3	"	2	1	"	Fine.

Table K.₁— County of Westchester — (Continued).

No. of convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1881.				
2	December	2	......	Malicious trespass	Fine.
1	"	1	......	Petit larceny	R. C. protectory.
1	"	1	......	Truancy	R. C. protectory.
1	"	1	......	Vagrancy	Poor-house.
26	"	24	2	"	Jail.
4	"	4	......	"	Penitentiary.
	1882.				
2	January.	2	......	Assault and battery	Fine.
9	"	8	1	Intoxication	Fine.
3	"	2	1	"	Jail.
4	"	4	......	"	Penitentiary.
2	"	2	......	Petit larceny	Penitentiary.
1	"	1	......	Threats	Penitentiary.
1	"	1	......	"	Bonded.
1	"	1	......	Truancy	House of refuge.
38	"	38	......	Vagrancy	Jail.
15	"	15	......	"	Penitentiary.
1	"	1	......	"	House of refuge.
1	February.	1	.....	Assault and battery	Penitentiary.
3	"	3	......	" "	Jail.
1	"	1	......	" "	Fine.
6	"	6	......	Intoxication	Fine.
2	"	2	......	"	Jail.
1	"	1	......	Petit larceny	Jail.
1	"	1	......	Violating city ordinance	Fine.
28	"	27	1	Vagrancy	Jail.
11	"	10	1	"	Penitentiary.
1	"	......	1	"	House of Good Shep'd.
2	March.	1	1	Assault and battery	Fine.
3	"	2	1	" "	Penitentiary.
1	"	1	......	" "	Jail.
4	"	3	1	Intoxication	Jail.
7	"	7	......	"	Penitentiary.
7	"	4	3	"	Fine.
1	"	1	......	Petit larceny	Penitentiary.
1	"	1	......	"	House of refuge.
3	"	3	......	Truancy	Home for Protest't chil.
19	"	18	1	Vagrancy	Jail.
2	"	2	......	"	Penitentiary.
1	April.	1	......	Assault and battery	Penitentiary.
3	"	2	1	" "	Fine.
2	"	2	......	"	Jail.
1	"	1	......	Disorderly	Penitentiary.
2	"	2	....	" child	R. C. protectory.
1	"	1	....	Exposure of person	Penitentiary.
4	"	3	1	Intoxication	Penitentiary.
3	"	3	......	"	Fine.
7	"	7	......	"	Jail.
15	"	14	1	Vagrancy	Jail.
1	May.	1	......	Assault and battery	Fine.
1	"	1	......	" "	Penitentiary.
2	"	......	2	Intoxication	Penitentiary.
16	"	16	......	"	Fine.
2	"	1	1	"	Jail.
4	"	3	1	Petit larceny	Penitentiary.
2	"	2	....	Vagrancy	Penitentiary.
2	"	2	....	"	Jail.
2	June.	2	....	Assault and battery	Jail.
3	"	3	....	" "	Fine.
1	"	1	....	" "	Penitentiary.
1	"	1	....	Disturbing religious meeting	Fine.
3	"	3	....	Disorderly	Fine.
1	"	1	....	"	Jail.

Table K. — County of Westchester — (Continued).

No. of convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1882.				
1	June.	1	......	Disorderly child	House of refuge.
1	"	1	......	Trespass on railroad.	Jail.
2	"	2	......	Intoxication	Jail.
11	"	9	2	"	Fine.
7	"	6	1	"	Penitentiary.
2	"	2	......	Petit larceny	Penitentiary.
2	"	2	......	"	Jail.
1	"	1	......	"	House of refuge.
1	"	1	......	"	Fine.
1	"	1	......	"	Catholic protectory.
7	"	7	......	Vagrancy	Penitentiary.
5	"	4	1	"	Jail.
1	"	1	......	"	House of refuge.
1	"	1	......	"	Catholic protectory.
2	July.	2	......	Assault and battery	Catholic protectory.
8	"	7	1	" "	Fine.
1	"	1	......	" "	Penitentiary.
4	"	4	......	" "	Jail.
6	"	6	......	Intoxication	Jail.
4	"	4	......	"	Penitentiary.
1	"	1	......	"	Suspended.
1	"	......	1	"	Fine.
1	"	1	......	Petit larceny	Fine.
1	"	1	......	"	Jail.
4	"	4	......	"	Penitentiary.
2	"	2	......	Violating excise law	Fine.
9	"	7	2	Vagrancy	Penitentiary.
3	"	3	......	"	Catholic protectory.
18	August.	18	......	Intoxication	Fine.
4	"	3	1	"	Penitentiary.
10	"	8	2	"	Jail.
3	"	3	......	Vagrancy	Jail.
8	"	8	......	"	Penitentiary.
2	"	2	......	Assault and battery	Penitentiary.
2	"	1	1	" "	Jail.
5	"	5	......	" "	Fine.
2	"	1	1	Petit larceny	Jail.
1	"	1	......	Indecent exposure	Jail and fine.
2	"	2	......	Depredations	Jail.
1	"	1	......	Trespass on railroad	Catholic protectory.
1	"	1	......	Violating city ordinance	Fine.
13	September.	13	......	Intoxication.	Fine.
5	"	3	2	"	Jail.
1	"	......	1	"	Penitentiary.
1	"	1	......	Petit larceny	House of refuge.
2	"	2	......	"	Fine.
1	"	1	......	"	Jail.
2	"	2	......	Assault and battery	Jail.
2	"	2	......	" "	Penitentiary.
1	"	......	1	Cruelty to animals	Fine.
2	"	2	......	Vagrancy	Jail.
7	"	7	......	"	Penitentiary.
1	"	1	......	"	House of refuge.
1	"	1	......	"	Catholic protectory.
2	October.	2	......	Assault and battery	Penitentiary.
3	"	3	......	" "	Fine.
7	"	7	......	Intoxication.	Fine.
2	"	2	......	"	Jail.
2	"	2	......	"	Penitentiary.
7	"	7	......	Vagrancy	Penitentiary.
2	"	2	......	"	Jail.
3	"	3	......	Petit larceny	Penitentiary.
1	"	1	......	Disorderly house	Fine.

Table K. — (Continued).

COUNTY OF WYOMING.

No. of convictions.	When convicted.	Males.	Females.	Offense.	Sentence.
	1882.				
1	January.	1	......	Intoxication.	Fine.
1	"	1	......	Vagrancy	Penitentiary.
1	"	1	......	Petit larceny.................	Fine and imprisonment.
1	"	1	......	Assault and battery..........	Fine.

TABLE L.

Abstract of Table K, in which the whole number of convictions of Special Sessions in each County during the year is given, the number of males and females, and the number of offenses of each description.

COUNTIES.	Attempt at petit larceny.	Allowing child to play pool	Acting as engineer unlawfully.	Assault to steal	Assault and battery.	Attempted rescue.	Assault on officer.	Affray.	Abandonment.	Assault to harm.	Breach of the peace.	Bastardy.	Carrying burglars' tools.	Committing nuisance.	Cruelty to animals.
Albany	....	....	....	....	13	....	4	....	....	....	3	....	....	....	1
Allegany	....	....	....	....	3	....	....	....	....	....	....	....	....	....	....
Broome	....	....	....	....	3	....	....	....	....	....	....	....	....	....	....
Cayuga	....	....	....	....	7	....	....	....	....	....	75	....	....	....	4
Chautauqua	....	....	....	....	20	....	....	....	....	....	1	....	....	....	....
Chemung	....	....	....	....	6	....	....	....	....	....	....	....	....	....	....
Cortland	....	....	....	....	5	....	....	....	....	....	....	....	....	....	....
Delaware	....	....	....	....	3	....	....	....	....	....	....	....	....	....	....
Dutchess	....	....	....	....	20	....	....	....	....	....	9	....	....	....	1
Erie	....	....	....	....	404	....	....	....	....	....	....	....	....	....	16
Essex	....	....	....	....	5	....	....	....	....	....	....	....	....	....	....
Franklin	....	....	....	....	20	....	....	3	....	....	....	....	....	....	1
Genesee	....	....	....	....	14	....	....	1	....	....	....	....	....	....	....
Herkimer	....	....	....	....	12	....	....	....	....	....	....	....	....	....	....
Jefferson	....	....	....	....	22	....	....	....	....	....	....	....	....	....	1
Kings	....	....	....	....	246	....	....	27	5	2	....	3	....	2	20
Madison	....	....	....	....	11	....	....	....	....	....	....	....	....	....	....
Monroe	....	....	....	....	96	....	....	....	....	....	....	....	....	....	3
New York	....	4	1	4	416	1	....	....	....	....	....	....	1	....	154
Niagara	....	....	....	....	28	....	....	....	....	....	1	....	....	....	1
Oneida	....	....	....	....	44	....	....	....	....	....	3	....	....	....	2
Onondaga	1	....	....	....	100	....	....	....	....	....	92	....	....	1	4
Ontario	....	....	....	....	30	....	1	....	....	....	5	....	....	....	1
Orleans	....	....	....	....	6	....	....	....	....	....	1	....	....	....	....

Table L. — (Continued).

COUNTIES.	Attempt at petit larceny.	Allowing child to play pool.	Acting as engineer unlawfully.	Assault to steal.	Assault and battery.	Attempted rescue.	Assault on officer.	Affray.	Abandonment.	Assault to harm.	Breach of the peace.	Bastardy.	Carrying burglars' tools.	Committing nuisance.	Cruelty to animals.
Oswego					32										3
Otsego					7										
Putnam					10										
Queens					93						3	1			2
Rensselaer					168			10	1		27				
Saratoga					19										1
Schoharie					1										1
Schuyler					3										
Seneca															
Steuben					24						1				1
St. Lawrence					19										
Suffolk					28										1
Sullivan					2										
Tioga					12										2
Tompkins					8										
Ulster					8										
Warren					5										
Washington															
Wayne					9										1
Westchester					79				1						1
Wyoming					1										

Table L.— (Continued).

COUNTIES.	Constructive larceny.	Contempt.	Carrying concealed weapons.	Cruelty to children.	Carrying liquor in jail.	Drunk and disorderly.	Disorderly.	Disorderly person.	Disorderly child.	Destitution.	Destitute children.	Disturbing religious meeting.	Driving without license.	Exposure of person.	Embezzlement.	Employing child to beg.
Albany																
Allegany	1					20	6									
Broome								29								
Cayuga			1		1	1		6								
Chautauqua	1					2		8						1		
Chemung	1					1	1	4						2		
Cortland																
Delaware								1								
Dutchess						15		6	1					2		
Erie			2				1088	3		28		1		5	6	
Essex						2	2									
Franklin						1										
Genesee						2	1							1		
Herkimer	1					2									1	
Jefferson						28		4								
Kings	4		1	1				32					2			
Madison								7								
Monroe							1	6								
New York				7										9	20	1
Niagara	1						9	21				2				
Oneida						2	2									
Onondaga							8	6						2		
Ontario	1					13	5	146						1	1	
Orleans						4	1	9						1		
Oswego						2	8	4				1		1		
Otsego								1								
Putnam							2									
Queens		1	1			66	43	16						5	3	

Table L. — (Continued).

COUNTIES.	Constructive larceny.	Contempt.	Carrying concealed weapons.	Cruelty to children.	Carrying liquor in jail.	Drunk and disorderly.	Disorderly.	Disorderly person.	Disorderly child.	Destitution.	Destitute children.	Disturbing religious meeting.	Driving without license.	Exposure of person.	Embezzlement.	Employing child to beg.
Rensselaer	......	......	......	......	......	......	339	......	......	......	3	......	......	2	......	......
Saratoga	......	......	......	......	......	......	7	......	......	......	......	......	......	......	......	......
Schoharie	......	......	......	......	......	......	......	......	......	1	......	......	......	......	......	......
Schuyler	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
Seneca	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
Steuben	1	......	......	......	......	......	2	......	......	......	......	......	......	......	......	......
St. Lawrence	......	......	......	......	......	......	3	......	......	......	......	......	......	......	......	......
Suffolk	......	......	......	......	......	......	......	1	3	......	......	2	......	......	......	......
Sullivan	......	......	......	......	......	......	2	......	......	......	......	......	......	......	......	......
Tioga	......	......	......	......	......	......	......	2	......	......	......	......	......	......	......	......
Tompkins	......	......	......	......	......	......	4	10	......	......	......	......	......	......	......	......
Ulster	......	......	......	......	......	......	......	1	......	......	......	......	......	......	......	......
Warren	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......
Washington	......	......	......	......	......	......	......	1	......	......	......	......	......	......	......	......
Wayne	......	1	......	......	......	......	......	......	......	......	......	1	......	2	......	......
Westchester	......	......	......	......	......	......	8	......	3	......	......	......	......	......	......	......
Wyoming	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......

Table L. — (Continued).

COUNTIES.	Frightening horses.	False pretenses.	Fraud.	Fornication.	Gambling.	Habitual drunkards.	Indecent assault.	Intoxication.	Interfering with officer.	Inmate house of ill-fame.	Intruding.	Keeping disorderly house.	Keeping gambling room.	Malicious prosecution.	Malicious mischief.	Misdemeanor.
Albany	......	......	......	......	......	......	......	......	......	......	......	......	......	......	1	......
Allegany	......	......	......	......	......	......	......	31	......	......	......	8	......	......	1	......
Broome	......	......	......	......	......	......	......	21	......	......	......	......	1	......	......	4
Cayuga	......	......	......	......	......	......	......	816	1	29	......	6	......	......	......	1
Chautauqua	......	......	......	......	......	......	......	43	......	......	......	......	......	......	1	1
Chemung	......	......	......	......	......	......	......	816	1	......	......	......	......	......	......	......
Cortland	......	......	......	......	......	......	......	66	......	......	......	......	......	......	......	......
Delaware	......	......	......	......	......	......	......	4	......	......	......	......	......	......	......	......
Dutchess	......	......	......	......	......	......	......	347	......	......	......	......	......	......	4	......
Erie	......	......	......	......	......	2	......	2152	1	......	......	......	4	1	36	......
Essex	......	......	......	......	......	......	......	11	......	......	......	......	......	......	......	......
Franklin	......	......	......	......	......	......	......	56	......	......	......	......	......	......	......	......
Genesee	......	......	......	......	......	......	......	61	......	......	......	......	......	......	......	......
Herkimer	......	......	......	......	......	......	......	77	......	......	......	1	......	......	2	......
Jefferson	......	1	......	......	......	......	......	91	......	1	......	......	......	......	......	......
Kings	......	......	2	2	......	48	......	3003	......	......	......	......	......	......	30	......
Madison	......	......	......	......	2	......	......	66	......	......	......	......	......	......	4	......
Monroe	......	......	......	......	......	......	......	9	......	......	......	......	......	......	......	......
New York	......	......	......	......	......	......	7	......	......	......	1	1	......	......	7	5
Niagara	......	......	......	......	......	......	......	157	......	......	......	1	......	......	2	......
Oneida	......	......	......	......	......	......	......	498	......	......	......	3	......	......	2	......
Onondaga	......	......	......	......	......	......	......	607	2	79	......	23	......	......	5	......
Ontario	......	1	......	......	......	......	......	160	......	......	......	6	......	......	......	......
Orleans	......	......	......	......	......	......	......	34	......	......	......	......	......	......	......	......
Oswego	......	......	......	......	......	......	......	39	......	......	......	5	......	......	3	......
Otsego	......	1	......	......	......	......	......	21	......	......	......	......	......	......	......	......
Putnam	......	......	......	......	......	......	......	41	......	......	......	......	......	......	......	......
Queens	......	......	......	......	......	......	......	41	......	......	......	......	......	......	16	......

Table L. — (Continued).

COUNTIES.	Frightening horses.	False pretenses.	Fraud.	Fornication.	Gambling.	Habitual drunkards.	Indecent assault.	Intoxication.	Interfering with officer.	Inmate house of ill-fame.	Intruding.	Keeping disorderly house.	Keeping gambling room.	Malicious prosecution.	Malicious mischief.	Misdemeanor.
Rensselaer	.....	.....	.....	.....	.....	5	.....	485	.....	.....	.....	.....	.....	.....	14	.....
Saratoga	.....	.....	.....	.....	.....	.....	.....	161	.....	.....	.....	.....	.....	.....	4	.....
Schoharie	.....	.....	.....	.....	.....	.....	.....	14	.....	.....	.....	.....	.....	.....	.....	.....
Schuyler	.....	.....	.....	.....	.....	.....	.....	19	.....	.....	.....	.....	.....	.....	.....	.....
Seneca	.....	.....	.....	.....	.....	.....	.....	10	.....	.....	.....	.....	.....	.....	.....	.....
Steuben	.....	.....	.....	.....	.....	.....	.....	319	.....	.....	.....	.....	.....	.....	.....	.....
St. Lawrence	.....	.....	.....	.....	3	.....	.....	50	.....	.....	.....	.....	.....	.....	2	.....
Suffolk	.....	.....	.....	.....	.....	.....	.....	9	.....	.....	.....	.....	.....	.....	7	.....
Sullivan	.....	.....	.....	.....	.....	.....	.....	87	.....	.....	.....	.....	.....	.....	.....	.....
Tioga	.....	.....	.....	.....	.....	.....	.....	101	.....	.....	.....	.....	.....	.....	.....	.....
Tompkins	1	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Ulster	.....	.....	.....	.....	.....	.....	.....	39	.....	.....	.....	.....	.....	.....	.....	.....
Warren	.....	.....	.....	.....	.....	.....	.....	12	.....	.....	.....	.....	.....	.....	.....	.....
Washington	.....	.....	.....	.....	.....	.....	.....	55	.....	.....	.....	.....	.....	.....	.....	.....
Wayne	.....	.....	.....	.....	.....	.....	.....	192	.....	.....	.....	1	.....	.....	.....	.....
Westchester	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Wyoming	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Table L.— (Continued).

COUNTIES.	Not supporting family.	Obstructing railroad.	Peddling without license.	Pool playing on Sunday.	Petit larceny.	Prostitution.	Profanity.	Resisting officer.	Receiving stolen goods.	Secreting mortgaged property.	Selling obscene prints.	Selling liquor to child.	Selling lottery tickets.	Trespass.	Threats.	Trespass on railroad.
Albany	......	......	......	1	12	......	......	......	......	......	......	......	......	......	......	......
Allegany	......	......	1	......	6	27	1	......	......	......	......	......	......	......	......	......
Broome	......	......	......	......	6	......	......	......	......	......	......	......	......	......	......	6
Cayuga	......	......	......	......	12	......	......	......	......	......	......	......	......	......	......	......
Chautauqua	......	......	......	......	16	......	1	......	......	......	......	......	......	......	......	2
Chemung	......	......	......	......	26	......	......	......	......	......	......	......	......	......	......	1
Cortland	......	......	......	......	8	......	......	......	......	......	......	......	......	......	......	1
Delaware	......	......	......	......	6	......	......	......	......	......	......	......	......	......	......	......
Dutchess	......	......	......	......	26	2	......	......	......	......	......	......	......	......	......	......
Erie	......	2	......	......	425	2	......	......	......	......	1	......	1	2	......	......
Essex	......	......	......	......	2	......	......	......	......	......	......	......	......	......	......	......
Franklin	......	......	......	......	6	......	......	......	......	......	......	......	......	......	1	......
Genesee	......	......	......	......	7	......	......	......	......	......	......	......	......	......	2	6
Herkimer	......	......	......	......	10	......	......	......	......	......	......	......	......	......	......	1
Jefferson	......	......	......	......	15	......	......	......	......	......	......	......	......	......	......	......
Kings	......	......	9	......	154	......	......	......	......	......	......	......	......	2	4	......
Madison	......	......	......	......	14	......	......	......	......	......	......	......	......	......	......	1
Monroe	......	......	......	......	122	......	......	......	......	......	......	......	......	......	1	7
New York	......	13	......	......	781	......	......	......	......	......	......	4	......	......	......	......
Niagara	......	......	......	......	25	1	......	......	......	......	......	......	......	......	......	......
Oneida	......	......	......	......	50	2	......	......	......	......	......	......	......	......	......	1
Onondaga	......	......	......	......	82	13	......	......	......	......	......	......	......	......	......	35
Ontario	......	......	......	......	35	......	1	1	......	......	......	......	......	......	1	5
Orleans	......	......	......	......	12	......	......	......	......	......	......	......	......	1	......	......
Oswego	......	......	......	......	11	7	1	......	......	......	......	......	......	......	......	......
Otsego	......	......	......	......	5	......	......	......	......	......	......	......	......	......	......	......
Putnam	......	......	......	......	3	......	......	......	......	......	......	......	......	......	......	......
Queens	......	......	......	......	58	......	......	1	3	......	......	......	......	3	1	......

Table L. — (Continued).

COUNTIES.	Not supporting family.	Obstructing railroad.	Peddling without license.	Pool playing on Sunday.	Petit larceny.	Prostitution.	Profanity.	Resisting officer.	Receiving stolen goods.	Secreting mortgaged property.	Selling obscene prints.	Selling liquor to child.	Selling lottery tickets.	Trespass.	Threats.	Trespass on railroad.
Rensselaer	1	......	......	......	89	......	......	......	......	......	......	......	......	2	......	......
Saratoga	......	......	......	......	25	......	......	......	......	......	......	......	......	......	......	1
Schoharie	......	......	......	......	7	......	......	......	......	......	......	......	......	......	......	......
Schuyler	......	......	......	......	4	......	......	......	......	......	......	......	......	......	......	......
Seneca	......	......	......	......	5	......	......	......	......	......	......	......	......	......	......	......
Steuben	......	......	......	......	14	......	......	......	......	......	......	......	......	......	......	9
St. Lawrence	......	......	......	......	10	......	......	......	......	......	......	......	......	......	......	......
Suffolk	......	......	......	......	18	......	......	......	......	......	......	......	......	......	......	......
Sullivan	......	......	......	......	10	......	......	......	......	......	......	......	......	......	......	......
Tioga	......	......	......	......	8	......	......	......	......	1	......	......	......	......	......	6
Tompkins	......	......	......	......	1	......	......	......	......	......	......	......	......	......	......	......
Ulster	......	......	......	......	3	......	......	......	......	......	......	......	......	......	......	......
Warren	......	......	......	......	3	......	......	......	......	......	......	......	......	......	......	......
Washington	......	......	......	......	12	......	......	......	......	......	......	......	......	......	......	3
Wayne	......	......	......	......	29	......	......	......	......	......	......	......	......	......	......	......
Westchester	......	......	......	......	1	......	......	......	......	......	......	......	......	4	2	2
Wyoming	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......

Table L. — (Continued).

COUNTIES.	Truancy.	Unlawfully riding on street car.	Violating sanitary code.	Violating excise law.	Violating city ordinance.	Vagrancy.	Violating Sabbath.	Violating game laws.	Violating State law.	Total.
Albany	......	......	......	2	2	......	......	......	......	39
Allegany	......	......	......	......	......	1	......	......	......	106
Broome	......	......	......	......	1	26	......	......	......	97
Cayuga	......	......	......	10	3	3	......	......	......	976
Chautauqua	......	......	......	4	1	23	......	......	......	124
Chemung	......	......	......	......	......	11	......	......	......	870
Cortland	......	......	......	......	......	6	......	......	......	86
Delaware	......	......	......	......	......	1	......	......	......	15
Dutchess	......	......	......	2	......	20	1	......	......	456
Erie	3	......	......	6	19	576	......	......	......	4787
Essex	......	......	......	1	......	2	......	......	......	25
Franklin	......	......	......	1	......	4	......	......	......	98
Genesee	......	......	......	......	......	6	......	......	......	101
Herkimer	......	......	......	1	......	120	......	......	......	228
Jefferson	......	......	......	2	......	6	......	......	......	171
Kings	15	......	45	......	536	325	......	......	4	4524
Madison	......	......	......	......	......	9	......	......	......	114
Monroe	......	......	......	1	......	45	......	......	......	291
New York	......	2	......	1	4	......	230	......	8	1682
Niagara	......	......	......	1	......	8	......	......	......	258
Oneida	......	......	......	......	18	56	3	......	......	686
Onondaga	......	......	......	3	24	42	......	......	......	1139
Ontario	......	......	1	5	......	80	......	......	......	500
Orleans	......	......	......	1	1	23	......	......	......	94
Oswego	......	......	......	......	......	......	2	......	......	119
Otsego	......	......	......	......	......	......	......	......	......	35
Putnam	......	......	......	......	......	3	......	......	......	59
Queens	......	......	......	3	2	24	73	1	......	460

Table L.— (Continued).

COUNTIES.	Truancy.	Unlawfully riding on street car.	Violating sanitary code.	Violating excise law.	Violating city ordinance.	Vagrancy.	Violating Sabbath.	Violating game laws.	Violating State law.	Total.
Rensselaer	1	......	......	......	5	51	......	......	1	1204
Saratoga	......	......	......	......	......	29	......	......	......	247
Schoharie	......	......	......	......	......	5	......	......	......	29
Schuyler	......	......	......	......	......	13	......	......	......	39
Seneca	......	......	......	......	......	......	......	......	......	15
Steuben	......	......	......	3	......	26	......	......	......	400
St. Lawrence	......	......	......	......	......	1	......	2	......	90
Suffolk	......	......	......	......	......	4	......	......	......	73
Sullivan	......	......	......	......	......	......	......	......	......	4
Tioga	......	......	......	......	......	27	......	......	......	148
Tompkins	......	......	......	......	......	1	......	......	......	132
Ulster	......	......	......	......	......	7	......	......	......	19
Warren	......	......	......	9	......	7	......	......	......	63
Washington	......	......	......	1	......	2	......	......	......	22
Wayne	......	......	......	......	2	10	......	......	......	88
Westchester	7	......	......	2	......	240	......	......	......	576
Wyoming	......	......	......	......	......	1	......	......	......	4

TABLE M.

CITY OF ALBANY.

	Assault and battery.	Assault on officer.	Breach of peace.	Cruelty to animals.	Interfering with officer.	Keeping disorderly house.	Malicious mischief.	Misdemeanor.	Petit larceny.	Violation excise law.	Violation city ordinance.	Violation electinn laws.	Total.
Number reported	26	8	5	2	1	1	2	1	17	4	4	2	73
Males	26	8	4	2	1	......	2	1	16	4	4	2	70
Females	......	......	1	......	......	1	......	......	1	......	......	......	3
Under 15 years of age	......	......	......	......	......	......	......	......	2	......	......	......	......
From 15 to 21 years of age	2	1	......	......	......	......	1	1	5	......	......	......	......
From 21 to 25 years of age	7	2	2	1	1	......	......	......	2	......	......	......	......
From 25 to 30 years of age	7	5	1	......	......	......	1	......	5	......	1	1	......
From 30 to 40 years of age	6	......	2	......	......	1	......	......	1	2	3	......	......
From 40 to 50 years of age	4	......	......	1	......	......	......	......	2	1	......	1	......
From 50 to 60 years of age	......	......	......	......	......	......	2	......	......	1	......	......	......
Unknown	26	8	5	2	1	1	2	1	17	4	4	2	73
Unknown	26	8	5	2	1	1	2	1	17	4	4	2	73
Unknown	26	8	5	2	1	1	2	1	17	4	4	2	73
Unknown	26	8	5	2	1	1	2	1	17	4	4	2	73
Unknown	26	8	5	2	1	1	2	1	17	4	4	2	73
Unknown	26	8	5	2	1	1	2	1	17	4	4	2	73
Unknown	26	8	5	2	1	1	2	1	17	4	4	2	73

Table M. — (Continued).

AUBURN CITY.

	Intoxication.	Breach of peace.	Constructive larceny.	Prostitution.	Violating excise law.	Profanity.	Petit larceny.	Carry'g liquor in jail.	Inmates of house of lil fame.	Disorderly house.	Non-support.	Assault and battery.	Carrying concealed weapons.	Exposure of person.	Defaulting witness.	Violating city ordinance.	Total.
Number reported	256	20	4	6	3	2	16	1	3	1	3	4	1	1	1	1	323
Males	243	16	4	....	3	1	15	1	....	1	3	4	1	1	1	1	295
Females	13	4	....	6	....	1	1	....	3	....	....	....	...	....	....	....	28
Under 15 years of age	......	....	....	....	....	....	8	....	....	....	....	....	....	....	...	....	......
From 15 to 21 years of age	16	7	1	2	....	....	3	....	3	....	1	1	1	....	....	....	......
From 21 to 25 years of age	28	6	...	1	....	....	2	1	....	....	2	2	....	....	....	....	......
From 25 to 30 years of age	41	3	1	3	....	....	1	....	....	....	....	....	....	....	1	1	.....
From 30 to 40 years of age	71	3	....	....	....	1	1	....	....	....	....	1	....	....	....	....	......
From 40 to 50 years of age	47	1	1	....	....	....	1	...	....	1	....	....	....	....	....	....	......
From 50 to 60 years of age	41	....	1	....	2	....	....	....	....	....	....	....	....	1	....	....	......
Over 60 years of age	12	....	....	...	1	1	....	....	....	....	....	...	....	....	....	....	.....
Married	182	3	1	2	3	2	3	1	3	1	3	1	....	....	....	....	......
Single	124	17	3	4	....	....	13	....	....	....	...	3	1	1	1	1	......
Natives of United States	180	12	4	5	...	1	7	....	3	1	3	4	1	1	1	1	......
Natives of Ireland	56	6	....	....	3	....	5	1	....	....	...	...	....	....	....	....	......
Natives of Germany	2	....	....	....	....	1	1	....	....	....	....	....	....	....	....	....	......
Natives of England	11	1	....	....	....	....	1	....	....	....	....	....	....	....	....	....	......
Natives of Scotland	3	....	....	....	....	....	....	....	...	....	....	....	....	....	....	....	......
Natives of France	1	1	....	....	....	....	....	....	....	....	....	...	....	....	....	....	......
Natives of Canada	1	....	....	1	....	....	1	....	....	....	....	....	....	....	....	....	......
Other foreign countries	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	......
Can read and write	217	14	4	5	3	2	16	1	3	1	3	4	1	1	1	1	......
Can read only	12	2	....	1	....	....	....	....	....	....	....	...	....	....	....	....	......
Cannot read or write	23	4	....	....	....	....	....	....	....	....	....	....	...	....	....	....	......
Unknown	4	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	......
Had religious instruction	246	20	4	5	3	2	16	1	3	1	3	4	1	1	1	1	......

Never had religious instruction	8	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	......
Unknown	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	......
Parents living	79	10	2	....	...	1	3	1	2	....	2	....	...	....	1	1	.....
Father living	17	1	....	1	....	....	7	....	1	...	....	1	....	....	....	....	......
Mother living	41	2	1	1	....	....	2	....	....	....	1	1	1	....	....	....	......
Parents dead	110	7	1	4	3	1	4	....	....	1	....	2	....	1	....	....	......
Unknown	9	....	.. ..	....	...	....	....	....	....	....	....	...	.. .	....	....	....	......
Before convicted	176	8	2	4	....	1	5	1	3	....	1	1	....	1	1	1	......
Never before convicted	49	5	....	2	3	1	11	....	....	1	2	3	1	....	....	....	......
Unknown	31	7	2	....	....	....	....	...	....	....	....	....	....	....	....	....	......
Temperate	71	....	2	4	3	....	9	1	1	1	2	1	1	1	....	....	......
Intemperate	185	20	2	2	...	2	7	....	2	....	1	3	....	....	1	1	......

Table M.—(Continued).

BINGHAMTON CITY.

	Drunk and disorderly.	Vagrants.	Petit larceny.	Cruelty to animals.	Violating ordinance.	Violating excise law.	Assault and battery.	Keeping disorderly house.	Riot.	Intoxication.	Disorderly.	Cruelty to children.	Malicious mchief.	Total.
Number reported	436	84	21	2	28	9	68	2	1	114	96	1	2	1863
Males	422	84	21	2	28	9	68	2	1	113	85	1	2	1839
Females	14	......	......	......	......	......	......	......	......	1	11	......	......	26
Under 15 years of age	4	8	15	......	19	......	4	......	......	1	37	......	......	......
From 15 to 21 years of age	90	10	2	......	2	2	12	......	1	30	29	......	......	......
From 21 to 25 years of age	164	15	3	......	1	2	31	2	......	42	9	1	......	......
From 25 to 30 years of age	126	41	1	1	3	2	10	......	......	30	9	......	2	......
From 30 to 40 years of age	28	8	......	1	3	1	8	......	......	9	5	......	......	......
From 40 to 50 years of age	23	1	......	......	......	2	3	......	......	1	3	......	......	......
From 50 to 60 years of age	......	......	......	......	......	......	......	......	......	......	1	......	......	......
Over 60 years of age	1	1	......	......	......	......	......	......	......	1	......	......	......	......
Unknown	......	......	......	......	......	......	......	......	......	......	3	......	......	......
Married	178	28	2	2	6	5	27	1	......	55	45	1	2	......
Single	258	56	19	......	22	4	41	1	1	59	51	......	......	......
Natives of United States	118	19	10	......	8	4	19	2	1	38	36	......	......	......
Natives of Ireland	248	28	8	2	6	2	28	......	......	45	41	......	......	......
Natives of Germany	34	17	3	......	2	......	10	......	......	8	4	......	......	......
Natives of England	18	8	......	......	3	1	5	......	......	15	9	1	2	......
Natives of Scotland	8	2	......	......	1	......	4	......	......	2	4	......	......	......
Natives of France	4	4	......	......	2	......	......	......	......	1	......	......	......	......
Natives of Canada	6	4	......	......	4	1	1	......	......	5	2	......	......	......
Unknown	......	2	......	......	2	1	......	......	......	......	......	......	......	......
Can read and write	304	51	14	2	16	9	44	1	1	72	66	1	2	......
Can read only	19	7	2	......	4	......	6	......	......	6	4	......	......	......
Cannot read or write	113	26	5	......	8	......	18	......	1	36	26	......	......	......
Had religious instruction	334	49	14	2	23	8	52	2	1	82	82	1	2	......
Never had instruction	102	35	7	......	5	1	16	......	......	32	14	......	......	......

Parents living	150	11	17	......	15	3	41	2	......	35	52	......	......	......
Father living	120	15	......	......	6	1	12	......	1	22	18	1	1	......
Mother living	96	27	3	......	1	......	8	......	......	23	12	......	1	......
Parents dead	70	30	1	2	6	5	7	......	......	34	14	......	......	......
Unknown	......	1	......	......	......	......	......	......	......	......	......	......	......	......
Before convicted	131	22	3	......	4	2	14	2	1	47	39	1	......	......
Never before convicted	305	62	18	2	24	7	54	......	......	67	57	......	2	......
Temperate	180	39	16	......	18	7	47	2	1	38	65	1	2	......
Intemperate	256	45	5	2	10	2	21	......	......	76	29	......	......	......

Table M. — (Continued).

BROOKLYN CITY.

	Assault and batery.	Assault.	Vagrancy.	Petit larceny.	Attempt at petit larceny.	Drunk and disorderly.	Malicious mischief.	Disorderly conduct.	Violation health laws.	Violation ordinance.	Truancy.	Habitual drunkard.	Threats.	Abandonment.	Total.
Number reported	1542	463	792	1230	295	7621	737	2466	985	2019	60	300	284	235	19029
Males	1123	339	574	839	162	5157	588	2083	800	1689	56	209	257	235	14111
Females	419	124	218	391	133	2464	149	383	185	330	4	91	27	......	4918
Under 15 years of age	......	......	96	152	60	64	94	60	......	168	47	......	......	......	......
From 15 to 21 years of age	124	42	126	199	73	492	180	369	9	306	13	2	......	3	......
From 21 to 25 years of age	321	124	108	224	55	1870	166	688	175	458	......	44	52	40	......
From 25 to 30 years of age	456	121	129	166	45	1924	103	796	355	541	......	83	93	39	......
From 30 to 40 years of age	328	108	159	200	21	1821	102	349	236	276	......	74	83	77	......
From 40 to 50 years of age	162	28	113	160	19	860	54	108	130	213	......	52	27	42	......
From 50 to 60 years of age	79	19	47	65	13	272	25	35	58	55	......	27	16	23	......
Over 60 years of age	72	21	14	64	9	98	13	8	2	2	......	18	13	1	......
Unknown	......	......	......	......	......	220	53	......	20	......	......	......	......	10	......
Married	935	261	350	746	164	4640	387	1463	843	1206	......	214	174	235	......
Single	607	202	422	484	131	2981	350	1003	142	813	60	86	110	......	......
Natives of United States	723	204	166	529	110	4118	294	1595	660	1138	57	150	212	141	......
Natives of Ireland	375	143	184	286	56	2172	148	474	98	379	2	65	24	49	......
Natives of Germany	150	53	142	193	32	731	98	121	110	263	1	34	3	9	......
Natives of England	95	32	101	122	25	331	72	62	31	137	......	17	31	34	......
Natives of Scotland	41	12	20	40	31	152	27	26	17	24	......	14	4	2	......
Natives of France	25	6	10	20	21	73	28	73	......	16	......	......	2	......	......
Natives of Canada	37	4	10	10	10	28	14	24	......	18	......	......	......	......	......
Other foreign countries	93	19	159	30	10	16	38	91	96	44	......	20	8	......	......
Can read and write	1287	353	640	924	235	6101	565	1902	903	1595	24	278	258	231	......
Can read only	75	50	92	146	44	560	62	206	52	214	8	8	4	......	......

Cannot read or write	180	40	60	160	26	960	110	358	30	210	28	14	22	4	......
Unknown	1542	463	792	1230	295	7621	737	2466	985	2019	60	300	284	235	......
Unknown	1542	463	792	1230	295	7621	737	2466	985	2019	60	300	284	235	......
Unknown	1542	463	792	1230	295	7621	737	2466	985	2019	60	300	284	235	......
Unknown	1542	483	792	1230	295	7621	737	2466	985	2019	60	300	284	235	......

Table M. — (Continued).

BUFFALO CITY.

	Assault and battery.	Intoxication.	Misdemeanor.	Petit larceny.	Vagrancy.	Malicious mischief.	Malicious trespass.	Truancy.	Total.
Number reported	497	128	120	496	95	56	6	6	1404
Males	416	98	107	403	76	44	5	6	1155
Females	81	30	13	93	19	12	1	....	249
Under 15 years of age	5	......	36	119	5	11	....	6	......
From 15 to 21 years of age	72	5	24	113	21	7	3	....	......
From 21 to 25 years of age	135	16	15	69	23	11	3	....	......
From 25 to 30 years of age	107	13	10	61	11	2	....	....	......
From 30 to 40 years of age	117	47	21	72	14	8	....	....	......
From 40 to 50 years of age	40	24	8	49	8	6	....	....	.....
From 50 to 60 years of age	17	18	7	13	5	11	....	....	......
Over 60 years of age	4	5	......	2	5	......	....	....	......
Married	200	62	34	122	20	22	2	2	......
Single	297	66	86	374	75	34	4	4	......
Natives of United States	308	74	82	329	47	41	5	5	......
Natives of Ireland	55	30	10	42	17	4	....	1	......
Natives of Germany	64	10	15	57	10	6	....	....	......
Natives of England	12	2	6	14	5	1	1	....	......
Natives of Scotland	3	2	1	2	......	1	....	....	......
Natives of France	3	......	1	1	1	......	....	....	......
Natives of Canada	34	10	4	32	8	2	....	....	......
Other foreign countries	18	......	1	19	7	1	....	....	......
Can read and write	397	106	98	382	78	47	5	6	......
Cannot read or write	100	22	22	114	17	9	1	....	......
Unknown	497	128	120	496	95	56	6	6	.....
Parents living	77	38	43	213	17	18	1	2	......
Father living	93	21	10	73	12	10	2	2	......
Mother living	116	42	17	63	14	7	1	....	......
Parents dead	211	27	50	147	52	21	2	1	......
Unknown	497	128	120	496	95	56	6	6	.....
Temperate	443	......	106	474	83	50	6	6	......
Intemperate	54	128	14	22	12	6	....	....	......

COHOES CITY.

	Assault and battery.	Breach of peace.	Cruelty to animals.	Disorderly conduct.	Embezzlement.	Indecent exposure.	Intoxication.	Misdemeanor.	Personating officer.	Petit larceny.	Vagrancy.	Total.
Number reported	25	151	1	8	1	7	337	2	1	39	13	585
Males	24	137	1	8	1	7	332	2	1	35	11	559
Females	1	14	....	....	...	....	5	....	....	4	2	26
Unknown	25	151	1	8	1	7	337	2	1	39	13	585
Unknown	25	151	1	8	1	7	337	2	1	39	13	585
Unknown	25	151	1	8	1	7	337	2	1	39	13	585
Unknown	25	151	1	8	1	7	337	2	1	39	13	585
Unknown	25	151	1	8	1	7	337	2	1	39	13	585
Unknown	25	151	1	8	1	7	337	2	1	39	13	585
Unknown	25	151	1	8	1	7	337	2	1	39	13	585
Unknown	25	151	1	8	1	7	337	2	1	39	13	585

Table M. — (Continued).

ELMIRA CITY.

	Assault and battery.	Breach of peace.	Drunk & disorderly.	Disorderly conduct.	False pretenses.	Intoxication.	Misdemeanor.	Petit larceny.	Vagrancy.	Violation of city ordinance.	Total.
Number reported	23	8	17	22	13	798	66	42	40	21	1050
Males	21	6	13	10	13	701	60	37	36	19	915
Females	2	2	4	12	....	97	6	5	4	2	135
Under 15 years of age	1	....	....	1	....	3	1	9	4	4	......
From 15 to 21 years of age	4	2	5	6	1	40	18	8	4	5	......
From 21 to 25 years of age	2	2	3	4	3	108	7	9	6	....	......
From 25 to 30 years of age	2	2	6	1	2	163	7	4	6	4	......
From 30 to 40 years of age	4	1	2	3	4	247	14	8	7	6	......
From 40 to 50 years of age	7	....	1	5	3	162	13	4	5	1	......
From 50 to 60 years of age	2	1	....	2	....	51	2	....	4	1	......
Over 60 years of age	1	....	....	....	....	24	4	....	4	....	......
Married	17	3	5	14	10	386	31	14	12	10	......
Single	6	5	12	8	3	412	35	28	28	11	......
Natives of United States	16	6	13	20	10	557	60	40	27	19	......
Natives of Ireland	2	2	3	1	1	161	4	1	2	1	......
Natives of Germany	3	....	....	....	1	32	....	....	3	1	......
Natives of England	1	....	1	....	....	18	....	....	1	....	......
Natives of Scotland	....	....	....	1	....	8	....	....	1	....	......
Natives of France	....	....	....	....	....	2	1	....	1	....	......
Natives of Canada	....	....	....	....	....	6	....	1	....	....	......
Other foreign countries	1	....	....	....	1	14	1	....	5	....	......
Can read and write	23	6	17	21	13	710	52	34	25	21	......
Can read only	....	....	....	....	....	3	6	....	....	....	......
Cannot read or write	....	2	....	1	....	85	8	8	15	....	......
Unknown	23	8	17	22	13	798	66	42	40	21	......
Unknown	23	8	17	22	13	798	66	42	40	21	......
Unknown	23	8	17	22	13	798	66	42	40	21	......
Unknown	23	8	17	22	13	798	66	42	40	21	......

HUDSON CITY.

	Assault and battery.	Drunk and disorderly.	Disorderly conduct.	Intoxication.	Petit larceny.	Vagrancy.	Violating city ordinance.	Total.
Number reported	14	3	2	49	14	19	14	115
Males	10	3	2	41	11	18	9	94
Females	4	......	......	8	3	1	5	21
From 15 to 21 years of age	1	......	2	3	......	......	1	7
From 21 to 25 years of age	3	1	.....	10	3	1	2	20
From 25 to 30 years of age	3	......	......	13	5	5	2	28
From 30 to 40 years of age	4	2	.....	10	......	6	5	27
From 40 to 50 years of age	1	.....	.....	6	4	4	3	18
From 50 to 60 years of age	2	......	......	7	1	2	1	13
Over 60 years of age	......	......	......	.....	1	......	......	1
Unknown	......	......	......	......	.....	1	......	1
Married	5	1	1	8	5	3	5	28
Single	9	2	1	32	8	6	9	67

Table M. — Hudson city — (Continued).

	Assault and battery.	Drunk and disorderly.	Disorderly conduct.	Intoxication.	Petit larceny.	Vagrancy.	Violating city ordinance.	Total.
Unknown	......	......	......	9	1	9	......	19
Natives of United States	5	......	2	24	6	6	7	50
Natives of Ireland	6	3	......	16	4	6	5	40
Natives of Germany	1	......	......	4	4	3	2	14
Natives of England	......	......	......	5	......	2	......	7
Natives of France	1	......	......	......	......	......	......	1
Other foreign countries	......	......	......	......	......	1	......	1
Unknown	1	......	......	......	......	1	......	2
Can read and write	8	1	2	31	8	4	8	62
Can read only	2	2	......	14	......	4	6	28
Cannot read or write	4	......	......	4	5	10	......	23
Unknown	......	......	......	......	1	1	......	2
Had religious instruction	8	2	2	34	8	4	10	68
Never had religious instruction	......	......	......	......	......	1	......	1
Unknown	6	1	......	15	6	14	4	46
Parents living	2	......	2	8	2	......	5	19
Father living	2	1	......	7	......	1	......	11
Mother living	3	1	......	9	2	1	2	18
Parents dead	5	1	......	16	9	12	7	50
Unknown	2	......	......	9	1	5	......	17
Before convicted	10	1	1	28	2	17	8	67
Never before convicted	4	1	......	13	7	2	4	31
Unknown	......	1	1	8	5	......	2	11
Temperate	3	......	......	1	1	......	2	7
Intemperate	11	3	2	48	6	19	12	107
Unknown	......	......	......	......	7	......	......	7

KINGSTON CITY.

	Intoxication.	Assault and battery.	Vagrancy.	Disorderly conduct.	Petit larceny.	Abandonment.	Malicious mischief.	Total.
Number reported	64	15	15	35	8	1	3	141
Males	60	14	10	27	5	1	3	120
Females	4	1	5	8	3	......	......	21
Under 15 years of age	......	......	......	......	1	......	......	......
From 15 to 21 years of age	4	4	1	6	1	1	1	......
From 21 to 30 years of age	24	7	......	15	5	......	2	......
From 30 to 40 years of age	21	4	7	12	1	......	......	......
From 40 to 50 years of age	9	......	4	2	......	......	......	......
From 50 to 60 years of age	5	......	3	......	......	......	......	......
Over 60 years of age	1	......	......	......	......	......	......	......
Married	25	11	10	19	2	1	1	......
Single	39	4	5	16	6	......	2	......
Natives of United States	40	12	7	23	8	1	1	......
Natives of Ireland	16	2	8	9	......	......	......	......
Natives of Germany	5	1	......	1	......	......	......	......
Natives of England	3	......	......	2	......	......	1	......
Other foreign countries	......	......	......	......	......	......	1	......

Table M.— Kingston City — (Continued).

	Intoxication.	Assault and battery.	Vagrancy.	Disorderly conduct.	Petit larceny.	Abandonment.	Malicious mischief.	Total.
Can read and write................	36	13	10	19	6	1	3	......
Can read only......................	9	1	......	5	1	......	......	......
Cannot read or write..............	19	1	5	11	1	......	......	......
Had religious instruction...... ...	60	14	15	26	7	1	3	......
Never had religious instruction. ..	4	1	......	9	1	......	......	......
Parents living	22	12	1	11	5	1	......	......
Father living......................	8	......	1	3	2	......	1	......
Mother living......................	12	.. ...	2	3	1	......	......	......
Parents dead	22	3	11	18	......	......	2	......
Before convicted......	32	10	8	20	5	......	1	... ..
Never before convicted............	32	5	7	15	3	1	2	......
Temperate..........................	33	3	4	14	4	1	1	......
Intemperate	31	12	11	21	4	......	2	......

LOCKPORT CITY.

	Petit larceny.	Assault and battery.	Vagrancy.	Intoxication.	Disorderly.	Misdemeanor.	Disorderly house.	Prostitutes.	Violation excise law.	Fraud.	Gaming.	Cruelty to animals.	Exposure of person.	Total.
Number reported	21	27	17	170	29	2	2	6	1	1	2	1	6	285
Males	19	27	10	157	28	1	....	....	1	1	2	1	6	253
Females	2	....	7	13	1	1	2	6	....	....	....	....	....	32
Under 15 years of age	10	....	2	....	....	....	....	....	....	....	....	....	1	....
From 15 to 21 years of age	3	4	....	13	3	....	....	....	....	....	....	....	4	....
From 21 to 25 years of age	1	4	2	21	4	1	1	3	....	1	....	1	1	....
From 25 to 30 years of age	....	7	3	17	5	....	....	3	....	....	....	....	....	....
From 30 to 40 years of age	1	4	4	30	5	....	....	....	1	....	....	....	....	....
From 40 to 50 years of age	9	5	4	48	3	....	....	....	1	....	....	....	....	....
From 50 to 60 years of age	2	3	2	31	2	1	1	1	....	....	....	....	....	....
Over 60 years of age	....	....	....	10	....	....	....	....	....	....	....	....	....	....
Unknown	....	....	....	....	7	....	....	....	....	....	....	....	....	....
Married	6	13	....	83	9	1	1	....	1	....	1	....	....	....
Single	15	14	....	87	20	1	1	6	....	1	1	1	6	....
Natives of United States	17	22	9	93	21	2	1	1	1	1	2	1	6	....
Natives of Ireland	1	5	7	72	4	....	....	....	....	....	....	....	....	....
Natives of Germany	1	....	....	5	....	....	....	....	....	....	....	....	....	....
Natives of England	2	....	1	....	1	....	....	....	....	....	....	....	....	....
Natives of Canada	....	....	....	....	3	....	1	5	....	....	....	....	....	....
Can read and write	9	24	11	138	28	2	2	6	1	1	....	1	6	....
Cannot read or write	12	3	6	32	1	....	....	....	....	....	2	....	....	....
Unknown	21	27	17	170	29	2	2	6	1	1	2	1	6	....
Parents living	15	15	7	24	25	1	1	6	....	....	1	1	6	....
Parents dead	6	12	10	156	4	1	1	....	1	1	1	....	....	....
Before convicted	6	3	13	7	4	8	....	....	....	....	....	1	....	....
Never before convicted	8	24	4	66	21	....	2	6	1	1	2	....	6	....
Unknown	7	....	....	....	....	2	....	....	....	....	....	....	....	....
Temperate	6	24	4	....	23	....	2	5	1	1	2	1	6	....
Intemperate	15	3	13	170	6	....	....	1	....	....	....	....	....	....
Unknown	....	....	....	....	....	2	....	....	....	....	....	....	....	....

Table M.—(Continued).

LONG ISLAND CITY.

	Assault and battery.	Drunk and disorderly.	Breach of the peace.	Disorderly conduct.	Misdemeanor.	Petit larceny.	Violating ordinance.	Intoxication.	Vagrancy.	Cruelty to animals.	Total.
Number reported	6	62	1	44	3	9	1	6	3	1	136
Males	6	40	1	37	3	8	1	4	....	1	101
Females	....	22	....	7	....	1	...	2	3	....	35
Under 15 years of age	....	....	....	1	....	....	....	....	....	....	....
From 15 to 21 years of age	1	6	....	16	1	....	....	....	....	....	....
From 21 to 25 years of age	1	3	....	4	1	2	1	....	1	....	....
From 25 to 30 years of age	1	3	...	2	....	2	....	....	....	....	....
From 30 to 40 years of age	2	19	....	11	....	5	....	....	1	....	....
From 40 to 50 years of age	....	17	...	5	1	....	....	4	1	....	....
From 50 to 60 years of age	....	13	1	3	....	....	....	2	....	1	....
Over 60 years of age	1	1	....	2	....	....	....	....	....	....	....
Married	2	34	1	15	1	3	....	5	2	....	....
Single	4	26	....	29	2	6	1	1	1	1	. .
Unknown	....	2	....	....	....	....	. . .	....	...	....	....
Natives of United States	3	17	....	26	1	7	1	2	1	....	....
Natives of Ireland	2	31	...	11	2	1	....	3	2	1	....
Natives of Germany	1	6	1	5	....	1	....	....	....	....	....
Natives of England	....	5	....	1	....	....	....	....	....	....	....
Natives of Scotland	....	2	....	....	....	....	....	1	....	....	....
Unknown	....	1	....	1	....	....	....	....	....	....	....
Can read and write	3	41	....	33	1	9	1	4	2	....	....
Can read only	....	4	1	4	1	....	....	1	1	....	....
Cannot read or write	3	17	....	7	1	....	....	1	....	1	...
Had religious instruction	4	38	....	33	2	9	1	3	. . .	. . .	....
Never had religious instruction	2	22	1	9	1	...	....	1	2	....	....
Unknown	...	2	....	2	....	....	....	2	1	1	....
Parents living	1	13	....	6	1	....	....	1	....	....	....
Father living	1	5	....	5	...	1	....	....	....	....	....
Mother living	1	8	....	14	1	3	....	2	....	....	...
Parents dead	3	36	1	19	1	5	1	3	....	1	....
Before convicted	4	40	1	21	2	2	1	3	1	....	....
Never before convicted	2	22	....	23	1	7	....	3	2	1	....
Temperate	....	....	....	22	1	3	....	...	3	1	....
Intemperate	6	62	1	22	2	6	1	6	....	....	....

Table M. — (Continued).

NEW YORK CITY.

	Assault and battery.	Abandonment.	Vagrancy.	Petit larceny.	Cruelty to animals.	Drunk and disorderly.	Bastardy.	Disorderly conduct.	Cruelty to children.	Violating city ordinance.	Indecent exposure.	Misdemeanor.	Violating health law.	Embezzlement.	Malicious mischief.	Keeping disorderly house.	Total.
Number reported	747	65	5017	1520	284	24665	56	9109	22	1972	5	93	364	22	6	3	43350
Males	685	65	2887	1348	282	17074	56	4156	18	1931	5	84	335	22	6	1	28355
Females	62	....	2130	172	2	7591	....	4953	4	41	....	9	29	...	....	2	14995
Under 15 years of age	16	....	2112	143	......	298	....	30	....	95	....	3	......	....	....	......	......
From 15 to 21 years of age	71	4	326	407	6	2869	7	681	...	435	1	3	5	9	1	1	......
From 21 to 25 years of age	103	7	223	255	8	3712	19	954	....	345	2	7	9	4	3	......	......
From 25 to 30 years of age	76	14	372	194	6	4337	16	1459	8	286	1	7	8	3	1	1	......
From 30 to 40 years of age	91	22	739	226	6	6648	7	2726	1	379	1	14	9	5	1	1	......
From 40 to 50 years of age	69	17	623	145	4	4605	2	1979	2	220	....	8	11	....	....	......	......
From 50 to 60 years of age	26	...	350	56	......	1459	1	830	2	76	....	4	1	....	....	......	......
Over 60 years of age	6	1	194	19	1	747	1	450	1	36	1	....	......	....	....	......	......
Unknown	285	....	76	75	253	....	3	......	8	100	....	47	321	1	....	......	......
Married	205	51	1979	502	14	11613	26	5002	...	728	3	19	24	7	1	1	......
Single	334	14	3038	973	90	13052	30	4107	13	1203	2	42	209	14	4	2	......
Unknown	208	....	......	45	180	....	....	......	9	41	....	32	131	1	1	......	......
Natives of United States	261	29	8051	511	18	12895	28	5326	3	1030	....	37	163	13	4	2	......
Natives of Ireland	116	19	1241	215	7	8018	12	3747	2	358	....	9	6	2	....	1	......
Natives of Germany	35	6	316	102	2	1588	15	407	...	226	....	6	13	4	....	......	......
Natives of England	15	1	160	89	......	900	....	336	.	45	....	....	1	....	1	......	......
Natives of Scotland	10	3	34	18	......	377	....	99	....	13	....	....	......	1	....	......	......
Natives of France	2	2	28	14	......	164	....	39	1	7	....	....	......	....	....	......	......
Natives of Canada	3	1	22	13	......	169	....	55	....	19	....	....	......	....	....	......	......
Other foreign countries	8	4	159	33	3	554	1	100	2	211	2	3	......	1	....	......	......
Unknown	297	....	6	77	254	....	....	......	14	13	3	38	181	1	1	......	......
Can read and write	406	51	4243	1331	29	22314	52	8204	5	1779	1	47	180	21	3	2	......
Can read only	13	4	150	37	......	829	2	333	1	44	1	2	2	....	....	......	......

Cannot read or write	31	10	618	75	1	1522	2	572	2	136	....	4	1	....	2	1	......
Unknown	297	...	6	77	254	......	....	......	14	13	3	38	181	1	1	......	......
Had religious instruction	747	65	5017	1520	284	24665	56	9109	22	1972	5	93	364	22	6	3	......
Parents living	33	5	600	162	......	1621	3	621	....	216	....	55	......	4	....	......	......
Father living	42	9	520	168	....	2001	6	730	4	220	..	....	3	6	6	......	......
Mother living	48	....	816	156	......	2240	6	623	....	207	2	....	......	....	....	......	......
Parents dead	327	51	3075	957	30	18803	41	7135	4	1316	....	....	180	11	....	3	......
Unknown	297	....	6	77	254	....	....	......	14	13	3	38	181	1	....	......	......
Before convicted	123	14	1921	321	3	2871	2	1327	2	640	1	3	14	2	2	1	......
Never before convicted	327	51	3090	1122	27	21794	54	7782	6	1319	1	52	169	19	3	2	......
Unknown	297	....	6	77	254	....	....	......	14	13	3	38	181	1	1	......	......
Temperate	357	53	3780	1371	27	3122	53	7282	6	1718	1	54	166	19	3	3	.. ...
Intemperate	293	12	1231	72	3	21543	3	1827	2	241	1	1	17	2	2	......	......
Unknown	297	....	6	77	254	....	....	......	14	13	3	38	181	1	1	......	......

Table M. — (Continued).

NEWBURGH CITY.

	Intoxication.	Misdemeanor.	Petit larceny.	Vagrancy.	Assault and battery.	False pretenses.	Assault on officer.	Disorderly person.	Disturbing religious meeting.	Malicious mischief.	Total.
Number reported	322	2	33	53	39	1	3	28	1	6	488
Males	299	2	32	51	39	1	3	27	1	6	461
Females	23	....	1	2	...	....	....	1	......	.....	27
Under 15 years of age	......	...	16	....	....	....	....	....	......	......	....
From 15 to 21 years of age	23	....	8	....	10	....	3	8	1	2	....
From 21 to 25 years of age	38	1	7	....	13	....	....	5	......	......	....
From 25 to 30 years of age	76	....	....	....	7	....	...	3	......	......	....
From 30 to 40 years of age	138	....	1	8	5	1	....	3	......	......	....
From 40 to 50 years of age	27	....	1	15	2	....	....	7	......	4	. ..
From 50 to 60 years of age	16	....	....	28	2	....	....	....	......	4	....
Over 60 years of age	4	1	....	2	....	....	....	2	......	......	....
Married	124	1	3	..	17	....	1	10	......	2	....
Single	198	1	30	28	22	1	2	18	1	4	....
Unknown	......	....	....	25	....	....	....	....	......	......	....
Natives of United States	112	....	30	...	21	....	....	8	......	2	....
Natives of Ireland	79	....	2	....	16	....	1	10	1	4	....
Natives of Germany	32	....	....	....	....	....	....	5	......	......	....
Natives of England	27	1	1	....	....	....	2	3	......	......	....
Natives of Scotland	......	...	....	....	....	1	..	2	......	......	....
Unknown	72	1	....	53	1	....	....	....	......	......	....
Can read and write	......	2	....	....	34	1	3	28	1	6	....
Cannot read or write	......	....	....	....	5	....	....	....	......	......	....
Unknown	322	....	33	53	....	....	....	....	......	......	....
Had religious instruction	......	2	....	....	39	1	3	28	1	6	....
Unknown	322	....	33	53	....	....	....	....	......	......	....
Parents living	......	1	....	....	8	....	1	12	......	2	....
Father living	... ..	....	...	. ..	3	. ..	....	3	......	......	....
Mother living	......	....	....	....	5	....	....	4	......	......	....
Parents dead	......	1	....	....	23	1	2	9	1	4	.....
Unknown	322	....	33	53	....	....	....	....	......	......	....
Before convicted	..	2	....	....	9	1	3	20	1	6	....
Never before convicted	......	....	....	....	10	....	....	8	......	... ..	....
Unknown	322	....	33	53	10	....	....	....	......	......	....
Temperate	......	....	....	....	19	. ..	....	8	......	......	...
Intemperate	......	2	...	...	20	1	3	20	1	6	....
Unknown	322	....	33	53	....	....	....	....	......	......	....

OGDENSBURG CITY.

	Assault and battery.	Total.		Assault and battery.	Total.
Number reported	1	1	Cannot read or write	1	...
Males	1	1	Never had religious instruction	1	....
From 30 to 40 years of age	1	....	Parents dead	1	....
Married	1	....	Never before convicted	1	....
Natives of Canada	1	....	Intemperate	1	....

Table M. — (Continued).

OSWEGO CITY.

	Assault and battery.	Drunk & disord'ly.	Intoxication.	Misdemeanor.	Petit larceny.	Violating ordinance.	Total.
Number reported	69	78	143	29	17	72	408
Males	63	65	126	27	17	52	350
Females	6	13	17	2	......	20	58
Under 15 years of age	6	......	......	......	3	4	......
From 15 to 21 years of age	15	17	12	6	8	12	......
From 21 to 25 years of age	11	15	28	6	2	10	......
From 25 to 30 years of age	10	10	14	3	3	14	......
From 30 to 40 years of age	5	8	30	3	......	12	......
From 40 to 50 years of age	6	7	9	1	1	2	......
Unknown	16	21	50	10	......	18	......
Married	44	28	89	15	2	39	......
Single	25	30	54	14	15	31	......
Unknown	......	......	......	......	......	2	......
Natives of United States	39	37	65	17	10	36	......
Natives of Ireland	11	20	43	4	3	18	......
Natives of Germany	1	1	6	1	......	......	......
Natives of England	1	4	2	2	......	4	......
Natives of Scotland	2	......	1	......	......	2	......
Natives of France	1	......	5	......	......	......	......
Natives of Canada	11	11	19	5	4	11	......
Other foreign countries	3	5	2	......	......	1	......
Can read and write	20	20	26	14	4	22	......
Can read only	6	4	12	......	4	4	......
Cannot read or write	13	13	25	2	2	10	......
Unknown	......	......	2	1	......	......	......
Unknown	69	78	143	29	17	72	......
Parents living	22	28	54	11	8	32	......
Father living	8	6	15	5	2	6	......
Mother living	5	10	14	2	3	6	......
Parents dead	32	31	57	11	4	28	......
Unknown	2	3	3	......	......	......	......
Before convicted	33	41	86	14	6	29	......
Never before convicted	36	37	57	15	11	43	......
Temperate	42	11	19	20	15	56	......
Intemperate	27	67	124	9	2	6	......

ROCHESTER CITY.

	Assault and battery.	Drunk and disorderly.	Disorderly conduct.	Intoxication.	Misdemeanor.	Petit larceny.	Vagrancy.	Violating ordinance.	Total.
Number reported	158	940	16	542	13	140	68	236	2113
Males	136	784	14	443	12	120	60	178	1747
Females	22	156	2	99	1	20	8	58	366
Under 15 years of age	2	......	......	......	......	19	15	11	......
From 15 to 21 years of age	29	86	......	33	1	25	16	39	......
From 21 to 25 years of age	28	134	2	59	3	21	5	28	......
From 25 to 30 years of age	39	203	7	102	3	22	4	54	......

Table M. — Rochester City — (Continued).

	Assault and battery.	Drunk and disorderly.	Disorderly conduct.	Intoxication.	Misdemeanor.	Petit larceny.	Vagrancy.	Violating ordinance.	Total.
From 30 to 40 years of age..	30	208	3	104	2	17	2	39	.. ...
From 40 to 50 years of age..	14	133	1	69	2	12	4	20	......
From 50 to 60 years of age..	7	78	......	55	......	2	5	9	......
Over 60 years of age	2	20	......	25	.....	3	2	.....	......
Unknown..................	7	48	3	95	2	19	15	36	......
Married	22	157	4	113	3	8	2	43	......
Single................	136	783	12	429	10	132	66	193	......
Natives of United States ...	106	615	9	356	11	106	50	180	......
Natives of Ireland	18	169	1	120	1	12	8	17	... ..
Natives of Germany	22	68	3	41	1	7	6	16	......
Natives of England	4	27	......	7	......	3	1	5	......
Natives of Scotland........	......	7	......	5	......	......	1	2	......
Natives of France..........	......	2	......	4	. ....	1	......	3	......
Natives of Canada	6	39	3	23	......	7	1	11	......
Other foreign countries	2	13	......	6	......	4	1	2	......
Can read and write	150	845	16	503	13	120	50	230	......
Can read only	5	52	......	25	......	15	8	3	......
Cannot read or write.......	3	43	......	14	......	5	10	3	......
Had religious instruction...	157	921	16	535	13	140	66	236	......
Never had religious inst'n..	1	19	......	7	......	......	2	......	......
Parents living	67	325	5	168	7	72	19	94	......
Father living	12	91	4	44	2	11	7	21	......
Mother living..............	19	137	3	71	1	19	10	36	......
Parents dead	60	387	4	159	3	38	32	85	......
Before convicted......	52	620	4	391	3	53	26	90	......
Never before convicted.....	96	320	12	151	10	97	42	146	......
Temperate.................	44	......	1	......	4	42	22	79	......
Intemperate	114	940	15	542	9	98	46	157	......

Table M.— (Continued).

ROME CITY.

	Assault and battery.	Breach of peace.	Drunk and disorderly.	False pretenses.	Intoxication.	Misdemeanor.	Petit larceny.	Vagrancy.	Violation of city ordinance.	Total.
Number reported	8	4	5	1	182	4	13	26	17	260
Males	......	......	2	......	173	......	......	25	14	244
Females	......	......	3	......	9	......	......	1	3	16
From 15 to 21 years of age	1	......	4	......	15	......	3	4	2	......
From 21 to 25 years of age	4	1	......	......	12	......	1	3	......	......
From 25 to 30 years of age	2	3	1	1	24	3	6	4	1	......
From 30 to 40 years of age	1	......	......	......	41	1	1	10	4	......
From 40 to 50 years of age	......	......	......	......	36	......	2	......	10	......
From 50 to 60 years of age	......	......	......	......	34	......	......	5	......	......
Over 60 years of age	......	......	......	......	20	......	......	......	......	......
Married	3	3	......	......	69	......	......	3	1	......
Married and having children	4	1	......	......	67	......	......	2	1	......
Single	1	......	5	1	46	4	12	21	15	......
Unknown	......	......	......	......	......	......	1	......	......	......
Natives of United States	7	4	5	1	120	1	12	19	8	......
Natives of Ireland	1	......	......	......	38	......	1	6	4	......
Natives of Germany	......	......	......	......	4	......	......	1	1	......
Natives of England	......	......	......	......	7	......	......	......	......	......
Natives of Scotland	......	......	......	......	2	......	......	......	2	......
Natives of Canada	......	......	......	......	4	......	......	......	......	......
Other foreign countries	......	......	......	......	6	3	......	......	2	......
Unknown	......	......	......	......	1	......	......	......	......	......
Can read and write	8	4	5	1	174	4	12	23	13	......
Can read only	......	......	......	......	5	......	1	2	1	......
Cannot read or write	......	......	......	......	3	......	......	1	3	......
Had religious instruction	8	4	5	1	177	4	13	24	10	......
Never had religious instruction	......	......	......	......	4	......	......	1	2	......
Unknown	......	......	......	......	1	......	......	1	5	......
Parents living	5	......	3	1	49	2	4	6	2	......

Table M. —*Rome City*— (Continued).

	Assault and battery.	Breach of pe^{a}ce.	Drunk and disorderly.	False pretenses.	Intoxication.	Misdemeanor.	Petit larceny.	Vagrancy.	Violation of city ordinance.	Total.
Father living	1	2	1	....	12	1	3	5	......	....
Mother living	1	2	1	....	32	....	4	4	2	....
Parents dead	1	....	....	....	84	1	2	11	12	....
Unknown	......	....	....	....	5	....	....	....	1	....
Before convicted	2	3	....	....	116	....	....	....	2	....
Never before convicted	6	1	5	1	36	4	13	26	15	....
Temperate	7	4	5	1	42	4	11	25	14	....
Intemperate	1	....	....	....	140	.....	2	1	3	....

Table M. – (Continued).

SCHENECTADY CITY.

	Assault and battery.	Breach of peace.	Intoxication.	Violating ordinance.	Total.
Number reported	20	2	127	34	183
Under 15 years of age	......	......	......	15	......
From 15 to 21 years of age	2	1	7	3	......
From 21 to 25 years of age	5	......	12	3	......
From 25 to 30 years of age	3	......	33	6	......
From 30 to 40 years of age	6	......	42	4	......
From 40 to 50 years of age	1	1	16	......	......
From 50 to 60 years of age	3	......	17	2	......
Over 60 years of age	......	......	......	1	......
Married	4	......	48	12	......
Single	16	2	79	22	......
Natives of United States	16	2	78	28	......
Natives of Ireland	1	......	12	6	......
Natives of Germany	2	......	19	......	......
Natives of England	......	......	12	......	......
Natives of Scotland	1	......	......	......	......
Other foreign countries	......	......	6	......	......
Had religious instruction	20	2	127	34	......
Parents living	10	2	21	12	......
Father living	2	......	12	8	......
Mother living	3	......	17	6	......
Parents dead	5	......	77	8	......
Before convicted	6	......	43	......	......
Never before convicted	14	2	84	......	......
Temperate	7	2	......	......	......
Intemperate	13	......	127	......	......

SYRACUSE CITY.

	Petit larceny.	Assault and battery.	Vagrancy.	Malicious mischief.	Intoxication.	Breach of the peace.	Misdemeanor.	Total.
Number reported	251	283	120	128	1413	171	694	3060
Males	210	254	114	126	1307	154	528	2693
Females	41	29	6	2	106	17	166	367
Under 15 years of age	54	24	11	103	20	9	76	......
From 15 to 21 years of age	55	35	26	23	103	40	210	......
From 21 to 25 years of age	30	60	23	......	210	26	94	......
From 25 to 30 years of age	34	60	13	1	258	29	72	......
From 30 to 40 years of age	59	59	16	1	356	40	114	......
From 40 to 50 years of age	23	27	15	......	258	18	62	......
From 50 to 60 years of age	12	14	12	......	157	10	50	......
Over 60 years of age	2	4	5	......	73	2	15	......
Unknown	......	......	......	......	2	......	......	......
Married	67	133	16	2	565	65	244	......
Single	184	150	104	126	848	106	450	......
Natives of United States	202	211	87	117	961	118	544	......

Table M. — Syracuse City — (Continued).

	Petit larceny.	Assault and battery.	Vagrancy.	Malicious mischief.	Intoxication.	Breach of the peace.	Misdemeanor.	Total.
Natives of Ireland	24	34	12	2	264	27	42	......
Natives of Germany	7	10	7	2	52	7	44	......
Natives of England	9	7	6	6	43	4	18	......
Natives of Scotland	......	3	3	......	8	2	......	......
Natives of France	......	......	......	......	2	2	6	......
Natives of Canada	8	5	1	2	67	4	26	......
Other foreign countries	1	13	4	1	16	7	14	......
Can read and write	206	250	104	118	1268	155	652	......
Cannot read or write	45	33	16	10	205	16	46	......
Unknown	251	283	120	128	1413	171	694	......
Parents living	191	228	73	123	841	134	542	......
Parents dead	60	55	47	5	572	37	152	......
Before convicted	151	178	55	45	836	109	344	......
Never before convicted	100	105	65	83	577	62	350	......
Unknown	251	283	120	128	1413	171	694	......

TROY CITY.

	Assault and battery.	Disorderly conduct.	Intoxication.	Petit larceny.	Vagrancy.	Total.
Number reported	69	275	317	57	42	760
Males	48	164	227	31	10	510
Females	21	91	90	26	32	250
Under 15 years of age	......	......	......	......	11	......
From 15 to 21 years of age	13	39	50	11	3	......
From 21 to 25 years of age	13	51	67	5	......	......
From 25 to 30 years of age	11	76	85	9	......	......
From 30 to 40 years of age	13	55	59	16	......	......
From 40 to 50 years of age	16	37	34	9	1	......
From 50 to 60 years of age	3	16	15	6	11	......
Over 60 years of age	......	1	7	1	16	......
Married	24	122	164	18	......	......
Single	45	153	153	39	42	......
Natives of United States	17	97	125	14	6	......
Natives of Ireland	44	158	168	34	21	......
Natives of Germany	6	13	17	6	7	......
Natives of Canada	2	7	7	3	8	......
Can read and write	51	185	206	43	12	......
Can read only	12	67	82	12	12	......
Cannot read or write	6	23	29	2	18	......
Had religious instruction	69	275	317	57	42	......
Parents living	26	107	111	21	......	......
Father living	15	74	92	14	4	......
Mother living	4	44	52	8	7	......
Parents dead	24	50	62	14	31	......
Before convicted	32	161	190	20	8	......
Never before convicted	37	114	127	37	34	......
Temperate	24	85	31	22	15	......
Intemperate	45	190	286	35	27	......

Table M. — (Continued).

UTICA CITY.

	Assault and battery.	Intoxication.	Petit larceny.	Vagrancy.	Disorderly conduct.	Violating ordinance.	Breach of peace.	Drunk & disorderly.	False pretenses.	Misdemeanor.	Nuisance.	Total.
Number reported............	33	418	34	40	4	16	6	6	4	2	2	465
Males.........................	....	344	34	38	2	6	6	5	2	2	2	374
Females	....	74	....	2	2	10	....	1	2	....	....	91
Under 15 years of age	2	......	1	2	2	....	1	....	....	....	....	....
From 15 to 21 years of age ...	8	30	6	6	1	5	3	3	....	2	....	....
From 21 to 25 years of age..	7	45	8	6	1	3	2	1	2	....	2	....
From 25 to 30 years of age....	3	47	3	6	....	3	....	....	2	....	....	....
From 30 to 40 years of age....	5	128	7	6	....	5	....	....	....	....	....	....
From 40 to 50 years of age....	2	110	2	6	....	....	....	2	....	....	....	....
From 50 to 60 years of age....	4	48	3	6	....	....	....	....	....	....	....	....
Over 60 years of age	2	16	....	2	....	....	....	....	....	....	....	...
Unknown	....	......	4	....	....	....	....	....	....	....	....	....
Married	27	133	2	9	2	1	6	3	2	....	....	....
Single	6	285	32	29	2	15	....	3	2	2	2	....
Unknown.....................	....	......	....	2	....	....	....	....	....	....	....	....
Natives of United States	22	247	28	22	3	9	4	4	4	2	2	....
Natives of Ireland............	11	108	...	11	1	7	2	2	....	....	....	....
Natives of Germany..........	....	12	2	1	....	....	....	....	....	....	....	..
Natives of England..........	....	13	1	....	....	....	....	....	....	...	....	....
Natives of Scotland	....	2	....	1	....	....	....	....	....	....	....	....
Natives of France............	....	5	....	1	....	....	....	....	....	....	....	....
Natives of Canada...........	...	3	1	3	....	....	....	....	....	....	....	....
Other foreign countries........	....	23	2	1	....	....	....	....	. ..	. ..	....	...
Unknown..................	....	5	....	....	....	....	....	....	....	....	....	....
Can read and write...........	33	406	34	40	3	16	6	3	4	2	2	....
Can read only,..............	....	2	....	....	...	....	....	3	....	....	....	....
Cannot read or write..	....	8	....	....	1	....	....	....	....	....	....	....
Unknown...........	....	2	....	....	....	....	....	....	....	....	....	....
Had religious instruction.....	33	409	34	40	4	16	6	3	4	2	2	....
Never had religious instruction	....	9	....	....	....	....	....	2	....	....	....	....
Unknown..................	....	......	....	....	....	....	....	1	....	....	....	....
Parents living	20	95	15	12	3	....	3	3	3	1	2	....
Father living............. ..	5	39	2	3	1	3	2	1	1	1	....	....
Mother living	2	96	3	6	....	7	1	2	....	....	....	....
Parents dead	5	173	12	19	....	6	....	....	....	....	....	....
Unknown...................	1	15	2	....	....	....	....	....	....	....	....	....
Before convicted............	5	261	3	5	2	7	2	2	....	....	....	. ..
Never before convicted	28	139	31	35	2	4	4	3	4	2	2	....
Unknown...................	....	18	....	....	....	....	....	1	....	....	....	....
Temperate..................	31	100	31	36	4	15	6	5	4	2	2	....
Intemperate	2	318	3	4	....	1	....	....	....	....	....	....
Unknown...................	....	......	....	....	....	....	....	1	....	....	....	....

STATE OF NEW YORK.

No. 137.

IN ASSEMBLY,

MARCH 29, 1883.

LIST

OF SPECIAL GENERAL ORDERS.

The Speaker and Clerk, with the consent of the House, referred the following bills to the sub-committee of the whole under Rule 40.

Assembly bill 688, G. O. 526. Introduced by Mr. W. H. Thompson:

An act to amend the Code of Civil Procedure.

Assembly bill 690, G. O. 528. Introduced by Mr. Miller:

An act to amend chapter 542 of the Laws of 1880, entitled "An act to provide for raising taxes for the use of the State upon certain corporations, joint-stock companies and associations, and the acts amendatory thereof."

Assembly bill 690, G. O. 532. Introduced by Mr. Crane:

An act for the appointment of commissioners to select and locate lands for public parks in the 23d and 24th wards of the city of New York, and in the vicinity thereof.

Assembly bill 692, G. O. 533. Introduced by Mr. Taylor:

An act to allow police captains or officers in charge of the several precincts of the city of Brooklyn to charge for making out bail bonds.

Senate bill 252, G. O. 607. Introduced by Mr. Covert:

An act to authorize the village of Flushing, in Queens county, to borrow money for the purpose of paying the indebtedness of said village.

Senate bill 211, G. O. 619. Introduced by Mr. Ellsworth:

An act to amend the Code of Civil Procedure.

Senate bill 314, G. O. 606. Introduced by Mr. Covert:

An act to authorize trustees of villages to regulate hawking, peddling, and auctions.

Senate bill 240, G. O. 602. Introduced by Mr. Covert:

An act to confirm and legalize certain taxes in the town of Flushing, in Queens county, and to legalize all sales for unpaid taxes in said town since and including the year 1877.

Senate bill 25, G. O. 569. Introduced by Mr. F. Lansing:

An act to amend the Code of Criminal Procedure.

Assembly bill 679, G. O. 517. Introduced by Mr. Donohue:

An act to amend chapter 232 of the Laws of 1854, an act entitled "An act for the incorporation of companies formed to navigate the lakes and rivers, passed April 15, 1854."

Assembly bill 680, G. O. 518. Introduced by Mr. Tremper:

An act to repeal chapter 348 of the Laws of 1879, entitled "An act to establish the compensation of county judge and surrogate of Ulster county."

Assembly bill 685, G. O. 523. Introduced by Mr. Johnson:

An act to amend section 1533 of the Code of Civil Procedure.

Assembly bill 686, G. O. 524. Introduced by Mr. Crane:

An act to amend section 3210 of the Code of Civil Procedure.

Assembly bill 707, G. O. 550. Introduced by Mr. Smith:

An act to provide for the appointment of a board of forest commissioners, and to define their duties.

Assembly bill 708, G. O. 551. Introduced by Mr. Baily:

An act to encourage planting and cultivating oysters or shell-fish in Long Island sound, opposite the shores of Suffolk county.

Assembly bill 709, G. O. 552. Introduced by Mr. De Witt:

An act to amend the Code of Civil Procedure.

Assembly bill 710, G. O. 556. Introduced by Mr. Odell:

An act to authorize towns to purchase stone crushers and engines for the purpose of macadamizing the highways.

Assembly bill 711, G. O. 557. Introduced by Mr. J. Murphy:

An act to prevent the use of drugs and substitutes for barley-malt and hops in the manufacture, brewing and sale of ale, porter, beer, lager beer and other fermented malt liquors.

Assembly bill 712, G. O. 558. Introduced by Mr. Bliss:

An act for the proper protection of domesticated animals during disease and for the further advancement of veterinary science.

Assembly bill 713, G. O. . Introduced by Mr. Berry:

An act concerning the grounds, buildings and property of religious corporations, the custody, protection and preservation of the same and the powers of trustees in relation thereto.

Assembly bill 718, G. O. 565. Introduced by Mr. O'Connor:

An act to amend section 3 of chapter 410 of the Laws of 1874, entitled "An act to authorize towns and villages to provide a sinking fund for their bonded indebtedness."

Senate bill 73, G. O. 66. Introduced by Mr. Allen :

An act to amend subdivision 4 of section 9 of chapter 13 of article 2, part first of the Revised Statutes, and to further define property that shall be subject to taxation.

Assembly bill 678, G. O. 516. Introduced by Mr. Williams:

An act to amend chapter 482 of the Laws of 1862, entitled "An act to provide for the collection of demands against ships and vessels," passed April 24, 1862.

Assembly bill 697, G. O. 538. Introduced by Mr. E. A. Maher:

An act to provide for the construction of a bridge at East Exchange street, in the city of Albany.

Assembly bill 702, G. O. 544. Introduced by Mr. Smith.

An act for the preservation and dedication to public use of the upper lock of the "Old Inland Lock Navigation Company" at Little Falls and the old stone bridge adjacent.

Assembly bill 703, G. O. 545. Introduced by Mr. Townsend:

An act in relation to incorporated villages.

Assembly bill 704, G. O. 546. Introduced by Mr. Hawley:

An act authorizing the Young Men's Association of the city of Buffalo to acquire additional property.

Assembly bill 705, G. O. 547. Introduced by Mr. Schwarz :

An act to repeal chapter 256 of the Laws of 1881, entitled "An act concerning charitable, benevolent and beneficiary associations, societies and corporations."

STATE OF NEW YORK.

No. 138.

IN ASSEMBLY,

March 29, 1883.

LIST OF GENERAL ORDERS.

G. O.

564. (Senate.) Introduced by Mr. Jacobs. An act to amend chapter 33 of the Laws of 1883, entitled "An act reappropriating money for the erection of an armory in the county of Kings."

565. Introduced by Mr. O'Connor. An act to amend section 3 of chapter 410 of the Laws of 1874, entitled "An act to authorize towns and villages to provide a sinking fund for their bonded indebtedness."

566. (Senate.) Introduced by Mr. Pitts. An act making an appropriation for the payment of awards made by the State Board of Audit in favor of George Worthington, and the interest thereon.

567. Introduced by Mr. DeWitt. An act to amend chapter 269 of the Laws of 1880, entitled "An act to provide for the review and correction of illegal, erroneous or unequal assessments."

568. Introduced by Mr. Rice. An act in relation to the appointment of notaries public.

569. (Senate.) Introduced by Mr. F. Lansing. An act to amend the Code of Procedure.

570. (Senate.) Introduced by Mr. Allen. An act to further define property that shall be subject to taxation.

571. Introduced by Mr. Miller. An act to further amend chapter 550 of the Laws of New York, entitled "An act relating to certain assessments for local improvements in the city of New York, passed June 9, 1880."

572. Introduced by Mr. Kiernan. An act to amend certain sections of the Penal Code.

573. Introduced by Mr. Clarke. An act to repeal chapter 282 of the Laws of 1880, entitled "An act for the preservation of lobsters."

G. O.

574. Introduced by Mr. Armstrong. An act to fix the place in which certain property shall be assessed and granting relief in cases of assessments in two places.

575. Introduced by Mr. Earl. An act to authorize the establishment of offices of loan and discount in cities on collateral security.

576. Introduced by Mr. McCarren. An act to provide for the grading and paving of a certain portion of Union avenue in the city of Brooklyn.

577. Introduced by Mr. Bulmer. An act to amend chapter 100 of the Laws of 1879, entitled "An act relating to and to reduce the expenses of the city government of Long Island City."

578. Introduced by Mr. Cleary. An act to provide for the payment of certain claims against the city of Troy.

579. Introduced by Mr. Burns. An act in relation to the commissioners of the department of excise in the city of Brooklyn.

580. Introduced by Mr. Derrick. An act to authorize the chamberlain of the city of Troy to pay certain persons for their services as acting officers, members and appointees of the Troy police force, and to authorize the city of Troy to issue bonds to provide the money for that purpose, and to amend section 5 of chapter 30 of the Laws of 1880, entitled "An act to amend chapter 598 of the Laws of 1870, entitled 'An act to amend an act to incorporate the city of Troy,' passed April 12, 1816, and the several acts amendatory thereof," and also to amend other acts relating to the city of Troy and supplemental thereto so as not to require any warrant to be drawn upon the chamberlain or to be countersigned by the comptroller to authorize such payment.

581. Introduced by Mr. Campbell. An act to amend chapter 333 of the Laws of 1874, entitled "An act to incorporate the Cotton Exchange Trust Company."

582. Introduced by Mr. Hall. An act in relation to railroads.

583. Introduced by Mr. Emans. An act to amend chapter 31 of the Laws of 1879, entitled "An act to enable such towns in the State as have altered the manner of working and repairing the highways from the system provided for in article second and article third of chapter 16, title 1, part 1 of the Revised Statutes, to the system provided for by chapter 395 of the Laws of 1873, to return to the system provided for in said first-named act."

584. Introduced by Mr. Godard. An act to prevent the sale, loan or gift to minors of dime novels or books of fiction.

585. (Senate.) Introduced by Mr. Grady. An act to pension teachers, tutors, assistant professors or full professors in the public schools and the college of the city of New York.

G. O.

586. (Senate.) Introduced by Mr. Holmes. An act to amend chapter 555 of the Laws of 1864, entitled "An act to revise and consolidate the general acts relating to public instruction, and the acts amendatory and supplementary thereto."

587. Introduced by Mr. M. C. Murphy. An act relating to the confinement of minors in the prisons of this State.

588. Introduced by Mr. M. C. Murphy. An act prohibiting the renewal of existing contracts for the employment of convict labor in the prisons and reformatories of this State and prohibiting the execution of any contracts for such labor.

589. An act to amend chapter 395 of the Laws of 1873, entitled "An act to alter the system of repairing the highways."

590. (Senate.) Introduced by Mr. Koch. An act to amend chapter 421 of the Laws of 1855, entitled "An act to regulate the liability of hotel-keepers and to amend chapter 802 of the Laws of 1871, entitled 'An act to amend chapter 677 of the Laws of 1867, entitled An act to prevent fraud and fraudulent practices upon or by hotel-keepers and innkeepers.'"

591. Introduced by Mr. M. C. Murphy. An act providing for the appointment of a board of prison commissioners and defining the duties and compensation thereof.

592. Introduced by Mr. Howe. An act to provide for a commission to investigate the contract labor system in the prisons, penitentiaries, in the prisons and reformatories in the State of New York.

593. Introduced by Mr. Keyes. An act to improve the sanitary condition of the State prison at Sing Sing.

594. Introduced by Committee on Cities. An act appropriating a certain amount of money, to repave, regrade and otherwise improve streets and avenues in the city of Brooklyn.

595. Introduced by Mr. M. C. Murphy. An act supplemental to and amendatory of an act entitled "An act to consolidate into one act and to declare the special and local laws affecting public interest in the city of New York, passed July 1, 1882."

596. An act to amend an act entitled "An act in relation to certain assessments for sewers in the city of Brooklyn, passed May 26, 1881."

597. Introduced by Mr. M. C. Murphy. An act extending and supplementing the rights, powers, duties and obligations heretofore conferred or imposed upon the Broadway Underground Railway Company.

598. Introduced by Mr. D. Lindsay. An act authorizing the construction of a draw-bridge over Newtown creek in Queens county.

599. Introduced by Mr. Bulmer. An act creating a board of town auditor, in the town of Newtown, Queens county, and prescribing their powers and duties.

G. O.

600. Introduced by Mr. Johnson. An act to authorize the town of Pelham, in the county of Westchester, to sell the City Island bridge.

601. Introduced by Mr. Church. An act to amend an act in relation to infectious and contagious diseases of animals, passed May 17, 1879.

602. (Senate.) Introduced by Mr. Covert. An act to confirm and legalize certain taxes in the town of Flushing, in Queens county, and to legalize all sales for unpaid taxes in said town since and including the year 1877.

603. Introduced by Mr. Smith. An act to amend an act entitled "An act to amend and consolidate the several acts relating to the village of Ilion, passed March 8, 1865."

604. Introduced by Mr. Smith. An act to amend an act entitled "An act for the incorporation of villages."

605. Introduced by Mr. Keyes. An act to repeal chapter 351 of the Laws of 1866, entitled "An act to incorporate the village of White Plains as amended by chapter 518 of the Laws of 1867, and by chapter 693 of the Laws of 1870, and by chapter 409 of the Laws of 1873, and by chapter 179 of the Laws of 1878, so far as the same relates to that portion of said village lying within the limits of the town of Newburgh."

606. (Senate.) Introduced by Mr. Covert. An act to authorize trustees of villages to regulate hawking, peddling and auctions.

607. (Senate.) Introduced by Mr. Covert. An act to authorize the village of Flushing, in Queens county, to borrow money and issue bonds for the purpose of paying the indebtedness of said village.

608. Introduced by Mr. Taylor. An act to repeal section 9 of chapter 240 of the Laws of 1854, entitled "An act to amend several acts in relation to State prisons, and making appropriations for the Clinton, Auburn and Sing Sing prisons, as amended by chapter 451 of the Laws of 1874."

609. Introduced by Mr. Taylor. An act to change the name of the Garfield Memorial Home to the Brooklyn Home for Consumptives.

610. Introduced by Mr. Odell. An act to legalize and confirm the official acts of J. Owen Moore, a justice of the peace of the town of Blooming Grove, Orange county.

611. Introduced by Mr. Haggerty. An act to provide for payment of the expense of certain proceedings for the judicial determination of the term of office of the surrogate of the county of New York.

612. Introduced by Mr. Roesch. An act to amend section 1298 of chapter 431 of the Laws of 1882, entitled "An act to consolidate into one act and to declare the special and local laws affecting public interests in the city of New York."

G. O.

613. Introduced by Judiciary Committee. An act in relation to the investment of trust funds and to changes in their investment.

614. Introduced by Mr. Keyes. An act to amend chapter 576 of the Laws of 1880, entitled "An act to ascertain by proper proofs the citizens who shall be entitled to the right of suffrage in cities of 16,000 inhabitants or upward, and the towns and villages abutting against the boundary of any such cities.

615. Introduced by Mr. Howe. An act to amend chapter 245 of the Laws of 1880.

616. Introduced by Mr. Kelley. An act to provide for the indexing of certain records in the Albany county clerk's office, and to provide for the payment of certain work done in relation thereto.

617. Introduced by Mr. Poucher. An act to amend the Code of Civil Procedure.

618. (Senate). Introduced by Mr. Jacobs. An act to incorporate the Long Island Loan and Trust Company.

619. (Senate.) An act to amend the Code of Civil Procedure.

620. Introduced by Mr. Cady. An act to amend chapter 214 of the Laws of 1871, entitled "An act to incorporate the Ithaca Fire Department."

STATE OF NEW YORK.

No. 139.

IN ASSEMBLY,

MARCH 30, 1883.

REPORT

OF THE SUB-COMMITTEE OF THE WHOLE.

Mr. Welch, from the sub-committee of the whole, to which was eferred the Assembly bill, G. O. 438, Printed No. 573, entitled "An ct to amend section 3053 of the Code of Civil Procedure," reported n favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Hoag,
Sweet,
Decker,
Clapp,
Helm,
Weed,
9

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 322, Printed No. 432, entitled "An act to alter the commissioners' maps of the city of Brooklyn," reported in favor of the passage of the same, with amendments as follows.

Change section one so that it will read:

SECTION 1. The maps made by the commissioners appointed pursuant to chapter 132 of the Laws of 1835, entitled "An act authorizing the appointment of commissioners to lay out streets, avenues and squares in the city of Brooklyn, and filed by them, and confirmed by chapter 41 of the Laws of 1839, entitled 'An act to confirm the proceedings and maps of the commissioners in laying out the city of Brooklyn, is hereby amended as follows:' "

Also change the title so that it will read:

An act to amend chapter 41 of the Laws of 1839, entitled "An act to confirm the proceedings and maps of the commissioners in laying out the city of Brooklyn, and the acts amendatory thereof.' "

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Hoag,
Sweet,
Decker,
Clapp,
Northup,
Helm,
Weed,
10

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 416, Printed No. 547, entitled "An act to amend the Code of Civil Procedure, and to repeal chapter 813 of the Laws of 1869," reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Hoag,
Sweet,
Decker,
Clapp,
Northup,
Helm,
Weed,
10

Mr. Welch, from the sub-committee of the whole, to which was referred the Assembly bill, G. O. 262, Printed No. 370, entitled "An act to amend the Code of Civil Procedure," reported in favor of the passage of the same, with amendments as follows:

Section one, line four, after the word "Monroe," insert "Cortland, Oswego, Westchester."

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Sweet,
Decker,
Clapp,
Northup,
Williams,
Helm,
Weed,
10

Mr. Welch, from the sub-committee of the whole, to which was referred the Senate bill, G. O. 441, Printed No. 132, entitled "An act to provide for an additional number of commissioners to take the acknowledgment or proof of deeds and other written instruments in other States and territories and in foreign States and countries," reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Hoag,
Sweet,
Decker,
Clapp,
Northup,
Helm,
Weed,
10

Mr. Welch, from the sub-committee of the whole, to which was referred the Senate bill, G. O. 529, Printed No. 61 entitled "An act to amend the Code of Civil Procedure," reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Hoag,
Sweet,
Decker,
Clapp,
Northup,
Weed, 9

For the Negative.

Helm, 1

Mr. Welch, from the sub-committee of the whole, to which was referred the Senate bill, G. O. 443, Printed No. 101, entitled "An act in relation to the use of books belonging to the sixth judicial district library, by the justices of the Supreme Court of such district, and the expenses of transporting the same," reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch.
Campbell,
Roosevelt,
Hoag,
Sweet,
Decker,
Clapp,
Northup,
Helm,
Weed, 10

Mr. Welch, from the sub-committee of the whole, to which was referred the Senate bill, G. O. 531, Printed No. 38, entitled "An act to amend the Code of Civil Procedure," reported in favor of the passage of the same, without amendment.

Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Hoag,
Sweet,
Decker,
Clapp,
Williams,
Helm,
Weed, 10

Mr. Welch, from the sub-committee of the whole, to which was referred the Senate bill, G. O. 386, Printed No. 106, entitled "An act to amend chapter 73 of the Laws of 1878, entitled 'An act to amend chapter 881 of the Laws of 1869, entitled 'An act to amend an act entitled 'An act to amend an act entitled 'An act to incorporate the village of Port Byron,' passed March 28, 1854," reported in favor of the passage of the same, with an amendment to the title of the engrossed bill by striking out at the end thereof "1854," and inserting "1855."

Also in section one, line ten, strike out "four," and insert "five."
Said bill was ordered reported by the following vote:

For the Affirmative.

Welch,
Campbell,
Roosevelt,
Sweet,
Decker,
Clapp,
Northup,
Williams.
Helm,
Weed.

10

STATE OF NEW YORK.

No. 140.

IN ASSEMBLY,

MARCH 30, 1883.

LIST

OF SPECIAL GENERAL ORDERS.

The Speaker and Clerk, with the consent of the House, referred the following bills to the sub-committee of the whole under Rule 40.

Assembly bill 742, G. O. 589. Introduced by Mr. Emans:

An act to amend chapter 395 of the Laws of 1873, entitled "An act to alter the system of repairing the highways."

Assembly bill 739, G. O. 584. Introduced by Mr. Godard:

An act to prevent the sale of dime novels or books of fiction to minors.

Assembly bill 738, G. O. 583. Introduced by Mr. Emans:

An act to amend chapter 31 of the Laws of 1879, entitled "An act to enable such towns in this State as have altered the manner of working and repairing the highways from the system provided for in article second and article third of chapter 16, title 1, part 1 of the Revised Statutes, to the system provided for by chapter 395 of the Laws of 1873, to return to the system provided for in said first-named act."

Assembly bill 672, G. O. 508. Introduced by Mr. Townsend:

An act to amend chapter 319 of the Laws of 1848, entitled "An act for the incorporation of benevolent, charitable, scientific and missionary societies," and the several acts amendatory thereof.

Assembly bill 674, G. O. 510. Introduced by Mr. H. D. Nelson:

An act to promote and encourage the replanting of forest.

Senate bill 269, G. O. 628. Introduced by Mr. Allen:

An act to amend chapter 248 of the Laws of 1872, entitled "An act to authorize the formation, establishing and maintaining of driving park, and park associations.

Assembly bill 730, G. O. 574. Introduced by Mr. Armstrong:

An act to fix the place in which certain property shall be assessed, and granting relief in cases of assessment in two places.

Assembly bill 729, G. O. 573. Introduced by Mr. Clarke:

An act to repeal chapter 282 of the Laws of 1880, entitled "An act for the preservatien of lobsters."

Assembly bill 726, G. O. 567. Introduced by Mr. De Witt:

An act to amend chapter 269 of the Laws of 1880, entitled "An act to provide for the review and correction of illegal, erroneous or unequal assessments."

Assembly bill 698, G. O. 539. Introduced by Mr. Clarke:

An act regulating the sale of real estate in the city of New York.

Assembly bill 220, G. O. 160. Introduced by Mr. Emans:

An act to amend chapter 304 of the Laws of 1882, entitled "An act to amend chapter 580 of the Laws of 1880, entitled 'An act to amend chapter 436 of the Laws of 1877, entitled An act in relation to county treasurers.' "

Assembly bill 244, G. O. 174. Introduced by Mr. E. Brooks:

An act to amend chapter 765 of the Laws of 1868, entitled "An act authorizing the supervisors of the several counties in the second judicial district, not including the county of Kings, to appropriate and pay compensation to justices of the Supreme Court, and to stenographers."

Assembly bill 247, G. O. 176. Introduced by Mr. Roche:

An act for the relief of Daniel J. McCarthy.

Assembly bill 281, G. O. 211. Introduced by Mr. Johnson:

An act in relation to the payment of the principal and interest upon certain bonds issued by the town of Eastchester, in the county of Westchester, and now owned by the Manhattan Savings Institution of the city of New York.

Assembly bill 379, G. O. 272. Introduced by Mr. Cary:

An act to amend chapter 410 of the Laws of 1882, entitled "An act to consolidate into one act and to declare the special and local laws affecting public interests in the city of New York."

Assembly bill 489, G. O. 366. Introduced by Mr. McManus:

An act to provide for the settlement and collection of arrearages of unpaid assessments upon unimproved or vacant lands situate in the city and county of New York.

Assembly bill 502, G. O. 379. Introduced by Mr. E. Brooks:

An act to amend chapter 415 of the Laws of 1876, entitled "An act supplementary to chapter 737, Laws of 1873, entitled 'An act in relation to the creation and formation of water-works companies in towns and villages of the State of New York.' "

Assembly bill 598, G. O. 463. Introduced by Mr. Church:

An act to amend an act entitled "An act to amend chapter 268 of the Laws of 1877, entitled 'An act in relation to the collection taxes and the sales of land therefor in certain towns of Queens county,'" passed May 10, 1877.

Assembly bill 734, G. O. 578. Introduced by Mr. Cleary:

An act to provide for the payment of certain claims against the city of Troy.

Assembly bill 653, G. O. 486. Introduced by Mr. E. A. Maher:

An act entitled "An act to provide for the acquisition of title by the United States to lands for light-house purposes, and to cede jurisdiction over the same."

Assembly bill 656, G. O. 489. Introduced by Mr. Townsend:

An act to amend chapter 314 of the Laws of 1874, entitled "An act to establish a board of police and fire commissioners of the city of Utica."

Assembly bill 669, G. O. 505. Introduced by Mr. Hoyt:

An act to amend chapter 285, Laws of 1879, entitled "An act to establish the compensation of the county judge and surrogate of Lewis county."

Assembly bill 670, G. O. 506. Introduced by Mr. Cleveland:

An act to legalize a vote passed at the annual town meeting in the town of Milo, Yates county.

Senate bill 182, G. O. 499. Introduced by Mr. A. Lansing:

An act to regulate the State Museum of Natural History and the publication of the palæontolgy.

Senate bill 195, G. O. 549. Introduced by Mr. Covert:

An act to amend chapter 392 of the Laws of 1882, entitled "An act to incorporate the German American Loan and Trust Company of New York."

Senate bill 177, G. O. 553. Introduced by Mr. MacArthur:

An act to fix the place in which certain property shall be assessed and granting relief in cases of assessment in two places.

Senate bill 221, G. O. 585. Introduced by Mr. Grady:

An act to pension teachers, tutors, assistant professors or full professors in the public schools and the college of the city of New York.

Senate bill , G. O. 630. Introduced by Mr. Thomas:

An act to provide for the sprinkling of streets and to defray the expense thereof by taxation in the village of Norwich, Chenango county.

Senate bill 100, G. O. 445. Introduced by Mr. Thomas:

An act to amend chapter 400 of the Laws of 1880, entitled "An act making appropriations for the several judicial district libraries."

STATE OF NEW YORK.

No. 141.

IN ASSEMBLY,

April 2, 1883.

LIST

OF SPECIAL GENERAL ORDERS.

The Speaker and Clerk, with the consent of the House, referred the following bills to the sub-committee of the whole under Rule 40.

Assembly bill 757, G. O. 598. Introduced by Mr. D. Lindsay:

An act authorizing the construction of a draw-bridge over Newtown creek in Queens county.

Assembly bill 758, G. O. 599. Introduced by Mr. Bulmer:

An act creating a board of town auditors in the town of Newtown, Queens county, and prescribing their powers and duties.

Assembly bill 759, G. O. 600. Introduced by Mr. Johnson:

An act to authorize the town of Pelham, in the county of Westchester, to sell the City Island bridge.

Assembly bill 760, G. O. 601. Introduced by Mr. Church:

An act to amend an act in relation to infectious and contagious diseases of animals, passed May 17, 1879.

Assembly 761, G. O. 603. Introduced by Mr. Smith:

An act to amend an act entitled "An act to amend and consolidate the several acts relating to the village of Ilion, passed March 8, 1865."

Assembly bill 776, G. O. 622. Introduced by Mr. Murray:

An act to amend section 42 of chapter 505 of the Laws of 1873, entitled "An act to reorganize the village of Gloversville," passed May 14, 1873.

Assembly bill 680, G. O. 626. Introduced by Mr. Roesch:

An act to amend section 2238 of chapter 17 of title 2 of the Code of Civil Procedure.

Assembly bill 782, G. O. 629. Introduced by Mr. Delahanty:

An act to provide for the construction of an iron bridge over the

STATE OF NEW YORK.

No. 141.

IN ASSEMBLY,

April 2, 1883.

LIST

OF SPECIAL GENERAL ORDERS.

The Speaker and Clerk, with the consent of the House, referred the following bills to the sub-committee of the whole under Rule 40.

Assembly bill 757, G. O. 598. Introduced by Mr. D. Lindsay:

An act authorizing the construction of a draw-bridge over Newtown creek in Queens county.

Assembly bill 758, G. O. 599. Introduced by Mr. Bulmer:

An act creating a board of town auditors in the town of Newtown, Queens county, and prescribing their powers and duties.

Assembly bill 759, G. O. 600. Introduced by Mr. Johnson:

An act to authorize the town of Pelham, in the county of Westchester, to sell the City Island bridge.

Assembly bill 760, G. O. 601. Introduced by Mr. Church:

An act to amend an act in relation to infectious and contagious diseases of animals, passed May 17, 1879.

Assembly 761, G. O. 603. Introduced by Mr. Smith:

An act to amend an act entitled "An act to amend and consolidate the several acts relating to the village of Ilion, passed March 8, 1865."

Assembly bill 776, G. O. 622. Introduced by Mr. Murray:

An act to amend section 42 of chapter 505 of the Laws of 1873, entitled "An act to reorganize the village of Gloversville," passed May 14, 1873.

Assembly bill 680, G. O. 626. Introduced by Mr. Roesch:

An act to amend section 2238 of chapter 17 of title 2 of the Code of Civil Procedure.

Assembly bill 782, G. O. 629. Introduced by Mr. Delahanty:

An act to provide for the construction of an iron bridge over the

Champlain canal, to connect with Arch street bridge over Mohawk basin, in the town of Watervliet, Albany county.

Senate bill 315, G. O. 611. Introduced by Mr. Grady:

An act to provide for payment of the expense of certain proceed- for the judicial determination of the term of office of the surrogate of the county of New York.

Assembly bill 762, G. O. 604. Introduced by Mr. Smith:

An act to amend an act entitled "An act for the incorporation of villages."

Assembly bill 763, G. O. 605. Introduced by Mr. Keyes:

An act to repeal chapter 351 of the Laws of 1866, entitled "An act to incorporate the village of White Plains as amended by chapter 518 of the Laws of 1867, and by chapter 693 of the Laws of 1870, and by chapter 409 of the Laws of 1873, and by chapter 179 of the Laws of 1878, so far as the same relates to that portion of said village lying within the limits of the town of Greenburgh."

Assembly bill 765, G. O. 609. Introduced by Mr. Taylor:

An act to change the corporate name of the Garfield Memorial Home to the Brooklyn Home for Consumptives.

Assembly bill 766, G. O. 610. Introduced by Mr. Odell:

An act to legalize and confirm the official acts of J. Owen Moore, a justice of the peace of the town of Blooming Grove, Orange county.

Assembly bill 768, G. O. 612. Introduced by Mr. Roesch:

An act to amend section 1298 of chapter 431 of the Laws of 1882, entitled "An act to consolidate into one act and to declare the special and local laws affecting public interests in the city of New York."

Assembly bill 774, G. O. 613. Introduced by Mr. Poucher:

An act in relation to the investment of trust funds and to changes in their investment.

Assembly bill 771, G. O. 616. Introduced by Mr. Kelley:

An act to provide for the indexing of certain records in the Albany county clerk's office, and to provide for the payment of certain work done in relation thereto.

Assembly bill 772, G. O. 617. Introduced by Mr. Poucher:

An act to amend the Code of Criminal Procedure.

Assembly bill 773, G. O. 620. Introduced by Mr. Cady:

An act to amend chapter 214 of the Laws of 1871, entitled "An act to incorporate the Ithaca fire department."

Assembly bill 672, G. O. 509. Introduced by Mr. T. J. Campbell:

An act to require the registering of the formation of general partnerships.

Assembly bill 736, G. O. 581. Introduced by Mr. T. J. Campbell:

An act to amend chapter 333 of the Laws of 1874, entitled "An act to incorporate the Cotton Exchange Trust Company."

ANNUAL REPORT

OF THE

COMPTROLLER

ON THE

TOLLS, TRADE AND TONNAGE

OF THE

CANALS

OF THE

STATE OF NEW YORK,

For the Year 1882.

TRANSMITTED TO THE LEGISLATURE APRIL 3, 1883.

ALBANY:
WEED, PARSONS AND COMPANY, PRINTERS.
1883.

STATE OF NEW YORK.

No. 142.

IN ASSEMBLY,

APRIL 3, 1883.

ANNUAL REPORT

OF THE COMPTROLLER, ON THE TOLLS, TRADE AND TONNAGE OF THE CANALS DURING THE SEASON OF NAVIGATION, FOR THE YEAR 1882.

STATE OF NEW YORK:

COMPTROLLER'S OFFICE,
BUREAU OF CANAL AFFAIRS,
ALBANY, *April* 3, 1883.

Hon. ALFRED C. CHAPIN,
Speaker of the Assembly:

Allow me, through you, to present to the Legislature the annual report from this department on the tolls, trade and tonnage of the canals for the year 1882.

Your obedient servant,
IRA DAVENPORT,
Comptroller.

REPORT.

STATE OF NEW YORK:

Comptroller's Office,
Bureau of Canal Affairs,
Albany, *April* 3, 1883.

To the Legislature of the State of New York:

The Comptroller, in accordance with the requirements of the statutes, submits to the Legislature the

ANNUAL REPORT

of the tolls, trade and tonnage of the canals of the State during the season of navigation of 1882, and all the matters which are required to be presented to the Legislature are fully and particularly set forth in the annexed tables.

The additional tables and comparative statements, which will be found embodied in this report, have been carefully compiled from official documents in order to show, as far as practicable, a comprehensive view of the trade and tonnage, by the canals, between the great lakes and the Hudson river and New York.

The whole amount of toll received was	$655,826

Which is composed as follows:

Tolls on yachts and pleasure boats	$937
Tolls on products of the forest	302,329
Tolls on vegetable food	322,144
Tolls on manufactures	1,006
Tolls on merchandise	2,099
Tolls on other articles	27,311
	$655,826

The whole amount of tonnage arriving at tide water, by way of the Erie canal, from Western States and Canada, during the last season of navigation, was 1,824,129. The whole amount of tonnage arriving at tide water, the products of this State, during the same period, was 278,311.

The whole number of barrels of flour arriving at tide water through the canals, during the last season of navigation was	1,969
The whole number of bushels of wheat arriving during the same period was 19,446,652, which turned into flour, calculating five bushels to the barrel, would make	3,889,330
Total in barrels	3,891,299

The whole number of bushels of corn arriving at tide water during the same period, was 7,284,673.

The total number of new boats registered during the last year was 93, with an aggregate tonnage of 13,275, making the average tonnage of each boat 143.

The total number of lockages at Alexander's lock, for the season, was 21,808, which was the greatest number at any one lock.

Comparing the season of 1882 with that of 1881, it shows an increase in revenue of $23,436, and a net increase in tonnage of 288,231 tons, divided among the different classes as follows:

Products of the forest, gain in tons		119,200
Vegetable food, gain in tons		2,215
Other agricultural product, gain in tons		1,358
Other articles, gain in tons		273,201
		395,974
Products of animals, loss in tons	1,716	
Manufactures, loss in tons	63,426	
Merchandise loss in tons	42,601	
		107,743
Net gain in tonnage moved		288,231

The whole amount of tonnage transported on the canals during the last season of navigation, ascending and descending, was 5,467,423 tons, composed as follows:

Paying Toll.

Products of the forest	1,712,299
Vegetable food	1,105,954
Manufactures	83,994
Merchandise	281,431
Other articles	2,035,710
Total tons paying toll	5,219,388

FREE LIST.

Products of the forest		59,444	
Products of animals	1,905		
Vegetable food	12,822		
Other agricultural products	52,576		
		67,303	
Manufactures		103,541	
Merchandise		1,743	
Other articles		16,004	
Total tons on free list			248,035
			5,467,423

The value of such tonnage is as follows:

CLASSES PAYING TOLL.

Product of the forest	$19,730,646
Vegetable food	38,068 005
Manufactures	2,658,378
Merchandise	61,072,297
Other articles	18,072,799
	$139,602,125

CLASSES ON FREE LIST.

Product of the forest		$554,866	
Product of animals	$480,982		
Vegetable food	1,205,114		
Other agricultural products	3,012,586		
		4,698,682	
Manufactures		2,015,062	
Merchandise		697,128	
Other articles		351,052	
			8,316,782
Total value all classes			$147,918,907

The total movement of freight paying toll, or tons carried one mile during the last season, was 582,033,028.* The total movement of the several classes composing such tonnage is as follows:

Product of the forest	196,687,628
Vegetable food	322,144,000
Manufactures	1,005,400
Merchandise	2,099,000
Other articles	60,097,000
	*582,033,028

---

* Does not include west bound freight or articles on the free list.

The increase in lockages at Alexander's lock is 1,564. In flour and wheat, comprised in the returns of vegetable food, there has been an increase in the tonnage the past year of 199,829 tons, and an increase in tolls of $70,070. In corn and oats there has been a decrease in tonnage during the same period of 232,277 tons, and a decrease in tolls of $80,480. Under the heads of "products of the forest" there was an increase in the tonnage upon boards and scantlings, shingles, timber and staves of 121,442 tons, and a decrease in the tonnage upon wood, pot and leached ashes of 2,242 tons. Under the head of "other articles," there was an increase in the tonnage of anthracite and bituminous coal, for the same period, of 136,432 tons, and an increase in sundries of 7,314 tons.

The whole number of bushels of barley transported on the canals in 1881 was......	3,399,458
The whole number transported in 1882 was............	4,027,083
Increase in 1882..................................	627,625

The whole number of bushels of barley which arrived at tide water in 1881 was............................	3,019,625
The number of bushels, which arrived in 1882, was.....	3,273,958
Increase in 1882..................................	254,333

The whole amount of tolls received on barley and barley malt in 1881, was..................................	$17,203
And in 1882............................... ...	19,504
Showing an increase in tolls of..................	$2,301

The following statement shows the number of tons of each class of property carried on the canals during the season of navigation in the year 1882, and on the Erie and Central railroads from the 1st of October 1881, to the 30th of September, 1882.

DESCRIPTION OF PROPERTY.	Tons of each class carried on the canals.	Tons of each class carried on the railroads.	Total tons of each class carried on the canals and railroads.
Products of the forest......	1,771,743	1,459,804	3,231,547
Products of animals......	1,905	1,276,102	1,278,007
Vegetable food............	1,118,776	3,885,557	5,004,333
Other agricultural products,	52,576	960,213	1,012,789
Manufactures.............	187,535	2,489,731	2,677,266
Merchandise..............	283,174	2,537,236	2,820,410
Other articles.............	2,051,714	10,616,988	12,668,702
Total tons carried.....	5,467,423	23,225,631	28,693,054

The mileage on the railroads was 4,349,189,020, being a decrease, as compared with 1881, of 340,371,675. The mileage on the canals (west bound freight and articles on the "free list" not included) was 582,033,028, being an increase, as compared with 1881, of 18,534,142.

Canal and Lake Freights.

The following monthly tables for the period commencing with the year 1861, and closing with the year 1882, and the weekly and monthly tables for the year 1882, have been carefully compiled from the daily commercial reports published in Chicago, Buffalo and Oswego. Verified as these reports are the Comptroller feels authorized to place them before the Legislature as, in their main features, accurate and reliable.

They present important and highly interesing facts in regard to the cost of transportation from the upper lakes through the canals to tide water. They show how much of the monthly average on the cost of transportation of a bushel of wheat or corn from Chicago to New York, is taken by the State for the use of 345 miles of artificial water navigation, and how much goes to the carrier by lake, canal and river.

STATEMENT showing the average rate of lake freight on wheat and corn between Chicago, Buffalo and Oswego; also the average rate of canal freight on the same articles between Buffalo, Oswego and New York, for each month during the season of canal navigation, 1861.

PERIOD.	From Chicago to Buffalo.		From Buffalo to New York.		From Chicago to Oswego.		From Oswego to New York.	
	Wheat. 60 lbs.	Corn. 56 lbs.	Wheat. 60 lbs.	Corn. 56 lbs.	Wheat. 60 lbs.	Corn. 56 lbs.	Wheat. 60 lbs.	Corn. 56 lbs.
	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.
April	13 6 9	12 8 1	......	......	17 3 3	15 6 6	......	......
May	07 2 5	06 3 7	13 8 7	12 8 1	11 5 6	10 5 6	09 2 8	08 0 0
June	06 8 8	06 3 1	11 3 8	10 3 8	10 0 0	09 3 8	08 0 0	07 0 0
July	05 7 5	05 2 5	11 5 0	10 5 6	08 5 6	07 9 3	08 0 0	07 0 9
August	10 0 0	08 8 1	11 8 1	10 8 1	13 8 8	12 6 3	08 2 5	07 2 5
September	14 0 0	12 9 3	15 7 5	14 5 0	18 9 3	17 8 1	10 7 5	09 7 5
October	18 6 3	17 2 5	20 3 1	18 3 8	24 4 3	22 5 0	13 9 3	12 9 3
November	16 0 8	14 7 5	25 6 6	23 5 8	20 6 6	19 2 5	19 5 8	18 5 0
Average for the season	11 5 3	10 5 6	15 7 5	14 4 3	15 6 7	14 4 6	11 1 1	10 1 0

The above rates include canal tolls, as follows:

On wheat, per bushel, from Buffalo to Troy	05 1 7
On corn, per bushel, from Buffalo to Troy	04 8 3
On wheat, per bushel, from Oswego to Troy	02 9 5
On corn, per bushel, from Oswego to Troy	02 7 5

Highest rate, lake freight, from Chicago to Buffalo	26c.	wheat.
Highest rate. lake freight, from Chicago to Oswego	30½c.	wheat.
Highest rate, canal freight, from Buffalo to New York	30c.	wheat.
Highest rate, canal freight, from Oswego to New York	22c.	wheat.

STATEMENT showing the average rate of lake freight on wheat and corn between Chicago, Buffalo and Oswego; also the average rate of canal freight on the same articles between Buffalo, Oswego and New York, for each month during the season of canal navigation, 1862.

PERIOD.	From Chicago to Buffalo.		From Buffalo to New York.		From Chicago to Oswego.		From Oswego to New York.	
	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.
	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.
May	6 8 1	6 1 5	13 5 0	11 5 0	10 5 0	9 6 3	9 9 4	8 5 0
June	8 5 0	7 6 9	12 8 1	10 8 1	12 0 0	11 0 0	8 5 0	7 2 5
July	12 0 0	11 0 6	14 2 5	12 2 5	17 1 3	16 0 6	9 1 3	7 8 7
August	7 4 4	6 6 9	15 1 2	13 1 3	12 0 0	11 2 5	9 6 2	8 3 8
September	10 5 0	9 5 0	17 2 5	15 1 8	15 6 9	14 6 8	12 6 9	11 1 3
October	12 8 8	11 8 7	18 3 1	16 1 2	17 6 8	16 6 9	12 1 8	10 7 5
November	15 3 1	14 2 5	19 6 3	17 3 1	21 5 6	20 5 6	15 3 1	13 1 8
Average for the season	10 4 9	9 6 0	15 8 4	13 7 6	15 2 2	14 2 7	11 0 5	9 5 8

The above rates include canal tolls, as follows:

On wheat, per bushel, from Buffalo to Troy	06 2 1
On corn, per bushel, from Buffalo to Troy	01 8 3
On wheat, per bushel, from Oswego to Troy	03 5 4
On corn, per bushel, from Oswego to Troy	02 7 5

Highest rate, lake freight, from Chicago to Buffalo	17c.	wheat.
Highest rate, lake freight, from Chicago to Oswego	22½c.	wheat.
Highest rate, canal freight, from Buffalo to New York	24½c.	wheat.
Highest rate, canal freight, from Oswego to New York	18c.	wheat.

STATEMENT showing the average rate of lake freight on wheat and corn between Chicago, Buffalo and Oswego; also the average rate of canal freight on the same articles between Buffalo, Oswego and New York, for each month during the season of canal navigation, 1863.

PERIOD.	From Chicago to Buffalo.		From Buffalo to New York.		From Chicago to Oswego.		From Oswego to New York.	
	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.
	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.
May	8 7 6	7 8 3	14 6 9	12 6 9	14 3 1	13 3 1	9 7 3	8 2 1
June	10 0 5	9 0 5	14 3 3	12 3 3	14 9 3	13 8 1	9 3 7	7 8 7
July	5 7 7	4 9 5	14 6 9	12 6 9	9 9 3	8 8 7	9 9 2	8 4 2
August	4 7 5	4 2 5	13 9 3	11 9 3	8 0 6	6 6 8	9 6 9	8 2 6
September	5 7 5	4 7 5	14 0 8	12 0 8	9 6 2	8 6 2	10 0 9	8 6 6
October	8 4 8	7 2 9	16 4 4	14 4 4	13 2 4	11 7 0	11 3 9	9 7 0
November	9 0 4	7 7 8	19 6 1	17 6 1	12 1 1	11 1 1	15 9 9	14 4 7
Average for season	7 5 1	6 5 6	15 3 9	13 3 9	11 7 4	10 5 9	10 8 9	9 3 7

The above rates include canal tolls, as follows:

On wheat per bushel, from Buffalo to Troy,	06 2 1
On corn per bushel, from Buffalo to Troy	04 8 3
On wheat per bushel, from Oswego to Troy	03 5 4
On corn per bushel, from Oswego to Troy	02 7 5

Highest rate lake freight from Chicago to Buffalo	12⅛c.	wheat.
Highest rate lake freight from Chicago to Oswego	17c.	wheat.
Highest rate canal freight from Buffalo to New York	25c.	wheat.
Highest rate canal freight from Oswego to New York	18c.	wheat.

STATEMENT showing the average rate of lake freight on wheat and corn between Chicago, Buffalo and Oswego; also the average rate of canal freight on the same articles between Buffalo, Oswego and New York, for each month during the season of canal navigation, 1864.

PERIOD.	From Chicago to Buffalo.		From Buffalo to New York.		From Chicago to Oswego.		From Oswego to New York.	
	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.
	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.
May	8 5 6	8 0 6	16 8 8	14 8 7	13 9 4	12 9 4	11 2 5	10 0 0
June	13 4 4	12 5 6	18 1 9	16 2 5	18 8 8	17 2 5	11 1 3	10 0 0
July	6 8 1	6 3 2	19 0 0	16 9 4	12 6 3	12 0 0	14 0 0	12 4 4
August	8 2 5	7 7 5	21 3 1	18 8 1	14 3 1	13 3 1	14 1 9	12 6 3
September	8 0 0	7 5 0	18 4 4	16 3 8	14 5 0	13 5 0	13 5 0	11 9 4
October	8 2 5	7 6 2	18 7 5	16 1 9	14 6 3	13 6 3	12 6 9	11 0 6
November	13 7 5	12 7 5	18 9 2	16 4 2	18 6 7	17 3 4	14 8 7	13 3 1
Average for season	9 5 8	8 9 4	18 7 8	16 5 5	15 3 7	14 2 8	13 0 9	11 6 2

The above rates include canal tolls, as follows:

On wheat per bushel, from Buffalo to Troy	06 2 1	Highest rate lake freight from Chicago to Buffalo	18c. wheat.
On corn per bushel, from Buffalo to Troy	04 8 3	Highest rate lake freight from Chicago to Oswego	24c. wheat.
On wheat per bushel, from Oswego to Troy	03 5 3	Highest rate canal freight from Buffalo to New York	22c. wheat.
On corn per bushel, from Oswego to Troy	02 7 5	Highest rate canal freight from Oswego to New York	18c. wheat.

STATEMENT showing the average rate of lake freight on wheat and corn between Chicago, Buffalo and Oswego; also the average rate of canal freight on the same articles between Buffalo, Oswego and New York, for each month during the season of canal navigation, 1865.

PERIOD.	From Chicago to Buffalo.		From Buffalo to New York.		From Chicago to Oswego.		From Oswego to New York.	
	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.
	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.
April	......	......	......	......	......	......	......	......
May	7 3 1	6 7 5	14 7 5	12 7 5	11 0 0	10 1 3	12 2 5	10 7 5
June	6 6 3	6 0 0	13 6 9	11 6 9	9 7 5	9 1 3	9 4 4	8 4 4
July	8 3 7	7 9 4	14 4 4	12 4 4	12 7 5	12 1 3	9 8 1	8 6 9
August	7 1 9	6 6 9	14 5 0	12 5 0	11 8 1	11 1 9	9 8 8	8 6 3
September	11 6 3	10 7 5	15 6 9	13 6 9	17 8 8	16 8 1	11 1 9	9 8 1
October	14 9 4	13 8 8	21 7 5	19 2 5	24 0 0	22 3 4	15 8 1	14 3 1
November	12 3 7	11 5 0	23 1 0	20 3 7	17 2 5	16 0 8	17 8 1	16 3 7
Average for the season	9 7 8	9 0 7	16 8 4	14 6 7	14 9 2	13 9 7	12 3 1	11 0 0

The above rates include canal tolls, as follows;

On wheat, per bushel, from Buffalo to Troy	06 2 1
On corn, per bushel, from Buffalo to Troy	04 8 3
On wheat, per bushel, from Oswego to Troy	03 5 4
On corn, per bushel, from Oswego to Troy	02 7 5

Highest rate, lake freight, from Chicago to Buffalo	19c. wheat.
Highest rate, lake freight, from Chicago to Oswego	27c. wheat.
Highest rate, canal freight, from Buffalo to New York	26c. wheat.
Highest rate, canal freight, from Oswego to New York	18c. wheat.

STATEMENT showing the average rate of lake freight on wheat and corn between Chicago, Buffalo and Oswego; also the average rate of canal freight on the same articles between Buffalo, Oswego and New York, for each month during the season of canal navigation, 1866.

PERIOD.	From Chicago to Buffalo.		From Buffalo to New York.		From Chicago to Oswego.		From Oswego to New York.	
	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.
	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.
April	......	......	......	......	......	......	......	......
May	12 5 0	11 1 9	13 6 3	11 6 3	18 1 3	16 7 5	9 7 5	8 2 5
June	15 6 3	13 6 2	16 6 2	14 3 7	21 1 2	19 5 0	10 6 3	9 1 3
July	11 6 3	9 6 3	17 8 2	14 8 8	17 1 3	14 7 5	12 1 8	10 6 8
August	10 3 7	8 4 4	15 7 5	13 3 1	15 2 5	13 6 3	10 2 5	8 7 5
September	12 7 5	10 3 7	17 5 0	14 6 3	19 7 5	18 0 0	11 0 0	9 5 0
October	17 4 4	15 2 5	17 7 5	14 8 7	25 4 4	23 5 0	13 0 0	11 3 8
November	13 5 0	11 7 5	19 6 9	16 3 8	20 2 5	18 8 3	16 2 5	14 1 2
Average for the season	13 4 0	11 4 7	16 9 6	14 3 0	19 5 8	17 8 5	11 8 7	10 2 6

The above rates include canal tolls, as follows:

On wheat, per bushel, from Buffalo to Troy	06 2 1	Highest rate, lake freight, from Chicago to Buffalo	23c. wheat.
On corn, per bushel, from Buffalo to Troy	04 8 3	Highest rate, lake freight, from Chicago to Oswego.	30c. wheat.
On wheat, per bushel, from Oswego to Troy	03 5 4	Highest rate, canal freight, from Buffalo to New York	23c. wheat.
On corn, per bushel from Oswego to Troy	02 7 5	Highest rate, canal freight, from Oswego to New York	20c. wheat.

STATEMENT showing the average rate of **lake freight** *on* **wheat and corn** *between Chicago, Buffalo and Oswego; also the average rate of canal freight on the* **same articles** *between Buffalo, Oswego and New York, for each month during the season of navigation,* 1867.

PERIOD.	From Chicago to Buffalo.		From Buffalo to New York.		From Chicago to Oswego.		From Oswego to New York	
	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.
	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.
May	5 5 0	4 2 5	12 3 3	10 3 3	9 8 8	8 5 0	9 9 4	8 3 8
June	5 5 0	3 7 5	13 2 5	11 2 5	7 2 5	6 1 2	8 8 1	7 4 3
July	4 7 5	3 8 8	13 8 8	11 8 8	8 0 7	6 7 5	9 8 8	8 3 8
August	5 5 0	4 1 8	13 7 5	11 7 5	9 2 5	8 1 3	9 8 7	8 2 5
September	8 1 3	7 0 0	16 3 1	13 4 4	13 6 9	12 5 0	11 1 3	9 1 8
October	9 3 1	7 9 3	21 1 9	18 1 9	15 6 9	14 1 3	15 3 0	12 9 4
November	8 0 0	7 0 0	19 1 3	16 3 8	12 2 5	11 1 7	15 3 8	13 6 3
Average for the season	6 6 7	5 4 3	15 6 9	13 3 2	10 8 7	9 6 2	11 4 8	9 7 4

The above rates include canal tolls, as follows:

On wheat per bushel, from Buffalo to Troy	06 2 1
On corn per bushel, from Buffalo to Troy	04 8 3
On wheat per bushel, from Oswego to Troy	03 5 4
On corn per bushel, from Oswego to Troy	02 7 5

Highest rate lake freight, from Chicago to Buffalo	15c.	wheat.
Highest rate lake freight, from Chicago to Oswego	18½c.	wheat.
Highest rate canal freight, from Buffalo to New York	25c.	wheat.
Highest rate canal freight, from Oswego to New York	17c.	wheat.

STATEMENT showing the average rate of lake freight on wheat and corn between Chicago, Buffalo and Oswego; also the average rate of canal freight on the same articles between Buffalo, Oswego and New York, for each month during the season of canal navigation, 1868.

PERIOD.	From Chicago to Buffalo.		From Buffalo to New York.		From Chicago to Oswego.		From Oswego to New York.	
	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.
	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.
May	5 2 5	4 0 6	14 5 6	11 8 1	9 6 3	8 8 7	9 7 5	8 2 5
June	5 3 1	4 2 5	13 5 7	11 0 7	9 2 5	8 1 3	9 5 0	8 0 0
July	4 2 5	3 6 3	13 7 5	11 2 5	8 6 3	7 5 0	9 5 0	8 0 0
August	7 8 1	6 6 2	14 1 3	11 6 3	11 4 3	10 4 3	9 5 0	8 0 0
September	9 1 9	7 7 5	16 2 5	13 6 8	14 8 7	13 6 2	11 7 5	10 2 5
October	8 8 1	7 7 5	18 0 0	15 3 7	14 4 3	13 3 1	13 4 3	11 8 1
November	9 3 1	8 3 1	19 2 5	16 2 5	13 3 4	12 1 7	15 0 8	13 3 4
Average for the season	7 1 4	6 0 5	15 6 5	13 0 1	11 6 5	10 5 8	11 2 2	9 6 7

The above rates include canal tolls, as follows:

On wheat, per bushel, from Buffalo to Troy	06 2 1
On corn, per bushel, from Buffalo to Troy	04 8 3
On wheat, per bushel, from Oswego to Troy	03 5 4
On corn, per bushel, from Oswego to Troy	02 7 5

Highest rate, lake freight, from Chicago to Buffalo	13½c.	wheat.
Highest rate, lake freight, from Chicago to Oswego	16c.	wheat.
Highest rate, canal freight, from Buffalo to New York	24c.	wheat.
Highest rate, canal freight, from Oswego to New York	17c.	wheat.

STATEMENT showing the average rate of lake freight on wheat and corn between Chicago, Buffalo and Oswego; also the average rate of canal freight on the same articles between Buffalo, Oswego and New York, for each month during the season of canal navigation, 1869.

PERIOD.	From Chicago to Buffalo.		From Buffalo to New York.		From Chicago to Oswego.		From Oswego to New York.	
	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.
	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.
May	5 8 3	5 5 0	13 7 5	11 6 2	10 0 0	9 6 7	9 2 5	8 0 0
June	7 5 0	7 1 9	13 6 9	11 6 9	12 2 5	11 5 0	8 5 6	7 5 0
July	4 7 5	4 3 8	12 9 4	10 9 4	8 9 4	8 4 4	8 7 5	7 7 5
August	5 2 5	4 6 2	13 7 5	11 7 5	9 5 0	8 8 8	9 0 6	8 0 6
September	6 5 6	6 0 0	16 0 0	13 7 5	10 4 4	9 8 1	11 1 3	9 7 5
October	7 5 6	7 0 6	21 6 9	18 4 4	12 6 3	11 8 1	18 7 5	16 3 8
November	10 2 5	9 1 7	22 3 4	18 8 4	15 5 0	14 0 0	17 1 9	14 6 9
Average for the season	6 8 1	6 2 7	16 3 1	13 8 6	11 3 2	10 5 9	11 8 1	10 3 0

The above rates include canal tolls, as follows:

On wheat, per bushel, from Buffalo to Troy	06 2 1
On corn, per bushel, from Buffalo to Troy, to Sept. 19th	04 8 3
On corn, per bushel, from Buffalo to Troy, from Sept. 20th	03 8 6
On wheat, per bushel, from Oswego to Troy	03 5 4
On corn, per bushel, from Oswego to Troy, to Sept. 19th	02 7 5
On corn, per bushel, from Oswego to Troy, from Sept. 20th	02 2 0

Highest rate, lake freight, from Chicago to Buffalo	12c.	wheat.
Highest rate, lake freight, from Chicago to Oswego	16½c.	wheat.
Highest rate, canal freight, from Buffalo to New York	25c.	wheat.
Highest rate, canal freight, from Oswego to New York	20c.	wheat.

STATEMENT showing the average rate of lake freight on wheat and corn between Chicago, Buffalo and Oswego; also, the average rate of canal freight on the same articles between Buffalo, Oswego and New York, for each month during the season of navigation. 1870.

PERIOD.	From Chicago to Buffalo.		From Buffalo to New York.		From Chicago to Oswego.		From Oswego to New York.	
	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.
	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.
May	4 8 9	4 6 3	11 5 6	10 7 5	9 0 0	8 3 1	8 2 5	7 7 5
June	5 8 8	5 3 1	10 6 9	10 0 0	10 1 9	9 7 5	7 4 4	6 9 4
July	5 1 3	4 6 3	10 3 1	9 5 6	9 1 9	8 6 3	7 2 5	6 7 5
August	5 0 6	4 6 3	10 0 0	9 3 1	9 5 0	9 1 3	7 2 5	6 7 5
September	4 7 5	4 3 1	10 6 9	9 9 4	9 0 0	8 5 0	7 6 3	7 1 3
October	7 3 1	6 8 8	13 3 1	12 4 4	12 3 8	11 4 4	9 4 4	8 8 1
November	8 1 3	7 6 3	12 0 0	10 4 1	12 5 0	11 6 3	10 0 6	9 4 3
Average for the season	5 8 8	5 4 3	11 2 2	10 3 5	10 2 5	9 6 2	8 1 9	7 6 5

The above rates include canal tolls, as follows:

On wheat, per bushel, from Buffalo to Troy	03 1 0
On corn, per bushel, from Buffalo to Troy	03 0 0
On wheat, per bushel, from Oswego to Troy	01 7 7
On corn, per bushel, from Oswego to Troy	**01 6 5**

Highest rate, lake freight, from Chicago to Buffalo	10c. wheat.
Highest rate, lake freight, from Chicago to Oswego	15c. wheat.
Highest rate, canal freight, from Buffalo to New York	16c. wheat.
Highest rate, canal freight, from Oswego to New York	12c. wheat.

STATEMENT showing the average rate of lake freight on wheat and corn between Chicago, Buffalo and Cswego ; also, the average rate of canal freight on the same articles between Buffalo, Oswego and New York, for each month during the season of navigation, 1871.

PERIOD.	From Chicago to Buffalo.		From Buffalo to New York.		From Chicago to Oswego.		From Oswego to New York.	
	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per busbel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.
	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.
May	4 5 0	4 0 6	11 6 2	10 6 2	9 7 5	9 1 2	7 1 2	6 6 2
June	5 6 9	5 3 2	10 2 0	9 2 0	9 0 0	8 5 0	7 2 0	6 6 9
July	5 0 6	4 5 0	11 1 2	10 1 2	9 1 2	8 5 0	7 3 7	6 8 7
August	6 0 7	5 5 6	11 7 5	10 7 5	10 5 0	9 7 5	8 0 7	7 5 7
September	9 2 5	8 6 9	13 6 2	12 6 3	14 9 4	14 0 0	9 3 1	8 8 1
October	13 3 1	12 3 7	13 9 4	12 9 4	18 2 5	17 0 6	11 0 6	10 3 8
November	9 5 0	8 9 2	16 0 6	14 5 0	14 8 4	13 8 4	12 3 1	11 5 0
Average for the season	7 6 2	7 0 6	12 6 2	11 5 4	12 3 5	11 5 4	8 9 2	8 3 5

The above rates include canal tolls, as follows;

On wheat, per bushel, from Buffalo to Troy 03 1 0
On corn, per bushel, from Buffalo to Troy 03 0 0
On wheat, per bushel, from Oswego to Troy 01 7 7
On corn, per bushel, from Oswego to Troy 01 6 5

Highest rate, lake freight, from Chicago to Buffalo .... 18c. wheat.
Highest rate, lake freight, from Chicago to Oswego .... 20c. wheat.
Highest rate, canal freight, from Buffalo to New York .... 17c. wheat.
Highest rate, canal freight, from Oswego to New York .... 14c. wheat.

STATEMENT showing the average rate of lake freight on wheat and corn between Chicago, Buffalo and Oswego; also, the average rate of canal freight on the same articles between Buffalo, Oswego and New York, for each month during the season of navigation, 1872.

PERIOD.	From Chicago to Buffalo.		From Buffalo to New York.		From Chicago to Oswego.		From Oswego to New York.	
	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.
	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.
May	8 3 7	7 8 3	9 8 7	9 0 0	13 8 7	13 3 7	7 0 7	6 2 5
June	8 3 7	7 6 2	12 3 7	11 0 6	14 2 5	13 5 0	7 0 6	6 5 0
July	8 8 1	8 0 0	14 5 0	10 5 0	13 1 2	12 5 0	7 6 6	6 9 5
August	9 5 6	8 8 7	12 1 2	11 1 8	13 6 8	10 4 3	8 0 0	7 2 5
September	14 5 6	13 5 0	12 3 1	11 1 2	14 9 3	14 2 5	8 4 7	7 7 5
October	16 5 6	15 5 0	14 5 6	12 8 7	17 6 8	16 8 1	10 5 1	9 5 0
November	11 8 1	10 8 1	16 0 0	14 0 0	16 0 0	14 6 2	12 0 0	11 0 0
Average for the season	11 1 5	10 3 0	13 1 0	11 3 9	14 7 9	13 6 4	8 6 8	7 8 8

The above rates include canal tolls, as follows:

On wheat, per bushel, from Buffalo to Troy	03 1 0	Highest rate, lake freight, from Chicago to Buffalo	18c. wheat.
On corn, per bushel, from Buffalo to Troy	03 0 0	Highest rate, lake freight, from Chicago to Oswego	20c. wheat.
On wheat, per bushel, from Oswego to Troy	01 7 7	Highest rate, canal freight, from Buffalo to New York	17c. wheat.
On corn, per bushel, from Oswego to Troy	01 6 5	Highest rate, canal freight, from Oswego to New York	14c. wheat.

STATEMENT showing the average rate of lake freight on wheat and corn between Chicago, Buffalo and Oswego; also, the average rate of canal freight on the same articles between Buffalo, Oswego and New York, for each month during the season of navigation, 1873.

PERIOD.	From Chicago to Buffalo.		From Buffalo to New York.		From Chicago to Oswego.		From Oswego to New York.	
	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.
	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.
May	6 4 5	5 5 0	12 0 0	10 8 0	13 0 0	12 1 5	8 2 5	7 5 0
June	6 2 4	5 8 5	10 5 0	9 5 0	11 8 0	11 0 0	7 6 4	7 1 8
July	6 1 2	5 4 8	10 5 0	9 5 0	11 1 2	10 5 5	7 2 5	6 7 5
August	6 1 2	5 5 2	10 6 0	9 6 0	12 7 5	11 7 2	7 3 1	6 7 5
September	13 0 7	11 7 8	12 2 0	10 4 0	20 7 2	14 0 0	7 7 5	7 1 3
October	7 8 7	7 0 1	12 6 0	11 1 0	15 0 0	13 6 2	8 5 0	7 2 5
November	7 5 0	7 2 7	12 6 0	11 1 0	15 0 0	12 3 7	9 3 5	7 4 3
Average for the season	7 6 2	7 2 0	11 5 7	10 2 8	14 2 0	12 2 0	8 0 1	7 1 4

The above rates include canal tolls, as follows:
On wheat, per bushel, from Buffalo to Troy 03 1 0
On corn, per bushel, from Buffalo to Troy.................................. 03 0 0
On wheat, per bushel, from Oswego to Troy....... .... 01 7 7
On corn, per bushel, fromOswego to Troy 01 6 5

Highest rate, lake freight, from Chicago to Buffalo............ 13c. wheat.
Highest rate, lake freight, from Chicago to Oswego .... 20c. wheat.
Highest rate, canal freight, from Buffalo to New York .... 13c. wheat.
Highest rate, canal freight, from Oswego to New York........ 9c. wheat.

STATEMENT showing the average rate of lake freight on wheat and corn between Chicago, Buffalo and Oswego; also the average rate of canal freight on the same articles between Buffalo, Oswego and New York, for each month during the season of canal navigation, 1874.

PERIOD.	From Chicago to Buffalo.		From Buffalo to N. Y.		From Chicago to Oswego.		From Oswego to N. Y.	
	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.
	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.
May	4 4 1	4 0 8	11 8 8	10 8 8	8 5 1	7 7 3	7 9 2	7 3 9
June	4 7 8	4 0 6	11 3 0	10 3 0	8 4 7	7 6 9	7 8 8	7 1 2
July	3 8 8	3 5 2	9 6 4	8 4 2	7 3 8	6 8 9	7 1 1	6 3 0
August	3 1 1	2 7 4	9 0 4	8 0 4	6 5 0	6 0 0	6 7 5	6 0 0
September	3 5 2	3 2 3	9 5 5	8 5 5	6 8 8	4 8 1	6 8 9	6 0 9
October	4 0 4	3 8 1	9 5 5	8 5 6	7 6 0	6 6 9	6 8 8	6 3 3
November	4 4 5	4 2 3	9 8 0	9 0 0	7 6 7	6 5 0	7 8 0	7 3 0
Average for the season	4 0 3	3 6 7	10 1 1	9 1 1	7 5 7	6 6 2	7 3 2	6 6 5

The above rates include canal tolls, as follows:

On wheat, per bushel, from Buffalo to Troy	03 1 0
On corn, per bushel, from Buffalo to Troy	03 0 0
On wheat, per bushel, from Oswego to Troy	01 7 7
On corn, per bushel, from Oswego to Troy	01 6 5

Highest rate, lake freight, from Chicago to Buffalo	6½c. wheat.
Highest rate, lake freight, from Chicago to Oswego	11½c. wheat.
Highest rate, canal freight, from Buffalo to New York	11½c. wheat.
Highest rate, canal freight, from Oswego to New York	7½c. wheat.

STATEMENT showing the average rate of lake freight on wheat and corn between Chicago, Buffalo and Oswego; also the average rate of canal freight on the same articles between Buffalo, Oswego and New York, for each month during the season of canal navigation, 1875.

PERIOD.	From Chicago to Buffalo.		From Buffalo to N. Y.		From Chicago to Oswego.		From Oswego to N. Y.	
	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.
	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.
May	3 8 1	3 5 0	7 5 3	6 7 8	7 5 0	7 0 0	5 8 7	5 9 0
June	3 2 2	2 8 2	6 9 2	6 2 7	7 1 2	6 6 2	5 5 0	5 0 0
July	2 6 4	2 4 2	7 5 2	6 8 1	6 0 9	5 8 0	5 5 0	5 0 0
August	2 6 0	2 3 3	8 2 5	7 5 0	5 5 6	5 0 0	6 0 0	5 3 7
September	2 6 2	2 2 2	7 1 0	6 5 4	6 0 0	5 0 0	5 5 0	5 0 0
October	3 4 8	3 2 1	8 1 1	7 4 3	6 0 6	5 7 2	6 3 0	5 8 0
November	5 5 4	5 0 9	10 6 2	9 2 5	9 0 0	8 2 5	7 9 1	7 4 1
Average for the season	3 4 2	3 0 8	8 0 1	7 2 3	6 7 6	6 2 0	6 0 8	5 6 4

The above rates include canal tolls, as follows:

On wheat, per bushel, from Buffalo to Troy	02 0 7
On corn, per bushel, from Buffalo to Troy	01 9 3
On wheat, per bushel, from Oswego to Troy	01 1 8
On corn, per bushel, from Oswego to Troy	01 1 0

Highest rate, lake freight, from Chicago to Buffalo	6½c. wheat.
Highest rate, lake freight, from Chicago to Oswego	10c. wheat.
Highest rate, canal freight, from Buffalo to New York	11c. wheat.
Highest rate, canal freight, from Oswego to New York	9¾c. wheat.

STATEMENT showing the average rate of lake freight on wheat and corn between Chicago, Buffalo and Oswego; also the average rate of canal freight on the same articles between Buffalo, Oswego and New York, also railroad freight from Buffalo to New York, for each month during the season of canal navigation, 1876.

PERIOD.	From Chicago to Buffalo.		From Buffalo to N. Y.		From Chicago to Oswego.		From Oswego to N. Y.		Railroad from Buffalo to New York.	
	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.
	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.
May	3 2 5	2 9 2	6 9 1	6 1 7	7 2 5	......	5 8 1	5 3 1	7 2 5	6 2 5
June	2 6 6	2 4 2	6 2 5	5 4 2	6 0 6	5 7 3	5 4 4	4 9 4	6 2 5	5 7 5
July	2 0 6	1 6 9	5 9 5	5 4 2	4 9 4	4 3 7	5 0 0	4 5 0	6 0 0	5 5 0
August	......	1 5 8	5 6 7	5 1 7	5 3 5	3 7 5	5 0 0	4 5 0	6 0 0	5 5 0
September	2 7 5	2 4 2	6 2 4	5 6 6	5 7 5	5 2 5	5 0 0	4 5 0	6 0 0	5 5 0
October	4 3 2	3 8 1	7 9 2	7 3 6	6 6 8	7 1 9	5 8 8	5 3 7	6 9 4	6 4 4
November	3 6 2	3 3 6	7 9 3	7 4 4	......	7 0 0	6 6 4	6 2 6	8 5 0	8 0 0
Average for the season.	3 1 1	2 6 0	6 7 2	6 0 9	6 0 1	5 5 5	5 5 4	5 0 5	6 7 1	6 1 3

The above rates include canal tolls, as follows:

On wheat, per bushel, from Buffalo to Troy	02 0 7
On corn, per bushel, from Buffalo to Troy	01 9 3
On wheat, per bushel, from Oswego to Troy	01 1 8
On corn, per bushel, from Oswego to Troy	01 1 0

Highest rate, lake freight, from Chicago to Buffalo.	5c.	wheat.
Highest rate, lake freight, from Chicago to Oswego.	7½c.	wheat.
Highest rate, canal freight, from Buffalo to New York.	10c.	wheat.
Highest rate, canal freight, from Oswego to New York.	9c.	wheat.

STATEMENT showing the average rate of lake freight on wheat and corn between Chicago, Buffalo and Oswego; also the average rate of canal freight on the same articles between Buffalo, Oswego and New York, also railroad freight from Buffalo to New York, for each month during the season of canal navigation, 1877.

PERIOD	From Chicago to Buffalo.		From Buffalo to N. Y.		From Chicago to Oswego.		From Oswego to N. Y.		Railroad from Buffalo to New York	
	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.
	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.
May	3 1 2	2 8 7	6 1 1	5 3 6	7 0 0	......	4 7 6	4 3 1	9 0 0	8 5 0
June	2 5 0	1 8 8	5 0 5	4 3 9	6 0 0	4 8 1	4 5 0	4 0 0	9 0 0	8 5 0
July	2 5 0	2 2 5	5 1 6	4 5 5	6 0 0	4 6 5	4 5 0	4 0 0	9 0 0	8 5 0
August	2 9 4	3 5 4	6 8 2	6 0 8	6 2 9	5 8 1	5 0 5	4 5 5	9 0 0	8 5 0
September	4 0 4	3 5 0	7 3 6	6 4 3	7 9 6	6 5 2	6 0 7	5 5 4	9 0 0	8 5 0
October	5 2 5	4 6 2	10 7 1	9 3 2	9 2 1	6 5 0	8 7 3	7 8 7	11 0 0	10 5 0
November	4 6 2	3 9 6	10 5 2	8 5 0	8 0 0	7 0 0	8 2 1	7 6 3	12 0 0	11 5 0
Average for the season.	3 5 7	3 2 3	7 3 9	6 3 8	7 2 1	5 8 8	5 9 7	5 4 2	9 7 2	9 2 2

The above rates include canal tolls, as follows:

On wheat, per bushel, from Buffalo to Troy	01 0 3
On corn, per bushel, from Buffalo to Troy	00 9 6
On wheat, per bushel, from Oswego to Troy	00 5 9
On corn, per bushel, from Oswego to Troy	00 5 5

Highest rate, lake freight, from Chicago to Buffalo	6c. wheat.
Highest rate, lake freight, from Chicago to Oswego	10c. wheat.
Highest rate, canal freight, from Buffalo to New York	12c. wheat.
Highest rate, canal freight, from Oswego to New York	10c. wheat.

STATEMENT showing the average rate of lake freight on wheat and corn between Chicago, Buffalo and Oswego ; also the average rate of canal freight on the same articles between Buffalo, Oswego and New York, also railroad freight from Buffalo to New York, for each month during the season of canal navigation, 1878.

PERIOD.	From Chicago to Buffalo.		From Buffalo to N. Y.		From Chicago to Oswego.		From Oswego to N. Y.		Railroad from Buffalo to New York.	
	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.
	c. m. f.	c. m. f.	c. m. f,	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.
April................	3 3 8	3 1 3	5 8 0	5 0 7	7 5 0	7 0 0	9 9 6	4 4 6	8 0 0	7 5 0
May..................	3 0 0	2 2 8	6 0 3	5 4 0	6 5 0	5 5 0	4 8 0	4 3 1	7 2 5	6 9 2
June.................	2 0 0	1 7 9	4 6 9	4 1 8	5 5 0	4 7 5	4 3 4	4 0 0	5 4 5	4 9 8
July.................	1 8 7	1 5 6	4 3 7	3 8 3	5 5 0	4 3 8	4 0 3	3 7 8	4 6 3	4 1 3
August...............	3 4 4	3 1 6	5 7 9	5 1 1	6 5 6	5 8 8	4 2 8	3 8 2	5 8 8	5 1 8
September............	4 3 9	4 0 4	8 0 8	7 1 3	8 5 0	7 1 6	6 8 1	6 3 3	8 1 3	7 6 3
October..............	3 6 4	3 3 4	8 1 6	7 1 0	8 5 0	6 0 0	7 1 9	6 6 9	8 5 0	8 0 0
November.............	3 6 7	2 9 4	4 9 8	4 2 7	8 5 0	6 0 0	6 1 6	5 5 1	8 1 7	7 6 7
Average for the season.	3 1 7	2 7 8	5 9 9	5 2 6	7 1 3	5 8 3	5 9 5	4 8 6	7 0 0	6 5 0

The above rates include canal tolls, as follows :

On wheat, per bushel, from Buffalo to Troy......................	01 0 3
On corn, per bushel, from Buffalo to Troy....	00 9 6
On wheat, per bushel, from Oswego to Troy	00 5 9
On corn, per bushel, from Oswego to Troy.........	00 5 5

Highest rate, lake freight, from Chicago to Buffalo........	5¼c. wheat.
Highest rate, lake freight, from Chicago to Oswego.......	8½c. wheat.
Highest rate, canal freight, from Buffalo to New York ...	8½c. wheat.
Highest rate, canal freight, from Oswego to New York...	7¼c. wheat.

STATEMENT showing the average rate of lake freight on wheat and corn between Chicago, Buffalo and Oswego; also the average rate of canal freight on the same articles between Buffalo, Oswego and New York, also railroad freight from Buffalo to New York, for each month during the season of canal navigation, 1879.

PERIOD.	From Chicago to Buffalo.		From Buffalo to N. Y.		From Chicago to Oswego.		From Oswego to N. Y.		Railroad from Buffalo to New York.	
	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.
	c. m f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.
May	2 9 8	2 6 5	4 8 8	4 3 6	5 0 0	4 7 5	4 0 0	3 6 3	6 7 3	6 2 3
June	2 1 5	1 8 4	4 4 3	3 6 4	5 0 0	4 2 5	4 0 0	3 6 3	5 0 0	4 5 0
July	2 7 1	2 4 3	5 2 8	4 7 8	5 4 0	4 6 9	3 8 4	3 5 5	5 2 0	4 7 0
August	5 0 2	4 5 8	6 5 5	5 9 8	7 7 5	7 2 5	4 9 4	4 5 3	7 2 4	6 7 4
September	5 6 2	4 9 1	8 1 8	7 4 8	8 2 5	8 0 0	6 8 0	6 3 0	9 0 0	8 5 0
October	7 7 0	7 1 5	9 0 9	7 9 7	9 4 4	9 0 0	7 5 4	7 0 1	9 9 6	9 4 6
November	6 8 3	6 3 7	10 3 3	8 8 1	13 0 0	11 8 3	8 6 7	7 9 2	11 6 2	11 1 2
Average for the season.	4 7 2	4 2 8	6 9 6	6 1 5	7 6 9	7 1 1	5 6 8	5 2 2	7 8 2	7 3 2

The above rates include canal tolls, as follows:

On wheat, per bushel, from Buffalo to Troy 01 0 3
On corn, per bushel, from Buffalo to Troy 00 9 6
On wheat, per bushel, from Oswego to Troy 00 5 9
On corn, per bushel, from Oswego to Troy 00 5 5

Highest rate, lake freight, from Chicago to Buffalo ...... 8½c. wheat.
Highest rate, lake freight, from Chicago to Oswego........ 13c. wheat.
Highest rate, canal freight, from Buffalo to New York... 12c wheat.
Highest rate, canal freight, from Oswego to New York... 9¾c. wheat.

STATEMENT showing the average rate of lake freight on wheat and corn between Chicago, Buffalo and Oswego; also the average rate of canal freight on the same articles between Buffalo, Oswego and New York; also railroad freight from Buffalo to New York, for each month during the season of canal navigation, 1880.

PERIOD.	From Chicago to Buffalo		From Buffalo to N. Y.		From Chicago to Oswego		From Oswego to N. Y.		Railroad from Buffalo to New York.	
	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.
	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.
April	3 7 9	3 3 6	6 6 2	6 0 7	......	7 1 0	5 2 7	4 7 7	9 0 0	8 5 0
May	5 0 0	4 5 6	6 0 3	5 5 3	8 7 5	7 6 3	4 7 8	4 2 8	9 0 0	8 5 0
June	7 2 0	6 7 0	6 8 9	6 3 9	9 6 9	9 1 9	5 5 9	5 0 8	9 0 0	8 5 0
July	5 0 7	4 5 7	6 1 2	5 6 2	7 9 4	7 4 4	5 1 6	4 6 6	9 0 0	8 5 0
August	5 7 8	5 3 0	5 9 8	5 4 2	9 7 5	8 6 3	5 0 7	4 5 7	9 0 0	8 5 0
September	4 4 0	3 9 0	5 9 2	5 2 8	8 0 0	7 5 0	5 1 2	4 6 9	9 0 0	8 5 0
October	6 7 5	6 2 5	6 7 2	6 1 3	8 0 0	7 5 0	5 4 0	4 8 6	9 0 0	8 5 0
November	7 1 7	6 5 4	8 3 9	7 6 2	8 0 0	7 5 0	7 0 3	6 4 0	9 0 0	8 5 0
Average for season	5 6 4	5 1 5	6 5 8	6 0 1	8 5 9	7 8 1	5 4 3	4 9 1	9 0 0	8 5 0

The above rates include canal tolls, as follows:

On wheat, per bushel, from Buffalo to Troy	01 0 3
On corn, per bushel, from Buffalo to Troy	00 9 6
On wheat, per bushel, from Oswego to Troy	00 5 9
On corn, per bushel, from Oswego to Troy	00 5 5

Highest rate, lake freight, from Chicago to Buffalo	8½ c. wheat.
Highest rate, lake freight, from Chicago to Oswego	10 c. wheat.
Highest rate, canal freight, from Buffalo to New York	9 c. wheat.
Highest rate, canal freight, from Oswego to New York	8 c. wheat.

STATEMENT showing the average rate of lake freight on wheat and corn between Chicago, Buffalo and Oswego; also the average rate of canal freight on the same articles between Buffalo, Oswego and New York; also railroad freight from Buffalo to New York, for each month during the season of canal navigation, 1881.

PERIOD.	From Chicago to Buffalo		From Buffalo to N. Y.		From Oswego to N. Y.		Railroad from Buffalo to New York.	
	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.
	c. m. f.	c. m. f.	c. m. f.	c. m. f	c. m f.	c. m. f.	c. m. f.	c. m. f.
May	4 5 8	4 1 7	6 1 7	5 5 4	4 6 5	4 2 7	9 0 0	8 5 0
June	4 2 8	3 8 1	4 7 4	4 2 4	4 1 6	3 7 1	8 2 5	7 7 5
July	3 2 7	2 8 0	4 3 2	3 8 2	3 8 8	3 4 8	7 5 0	7 0 0
August	3 0 6	2 7 1	4 0 8	3 5 9	3 8 7	3 3 7	6 7 5	6 2 5
September	3 6 5	2 9 3	4 7 9	4 2 7	4 0 8	3 5 8	6 7 5	6 2 5
October	2 6 0	2 1 1	5 0 5	4 5 5	4 5 9	4 1 7	6 7 5	6 2 5
November	2 3 3	1 8 9	5 0 3	4 5 7	5 5 4	5 1 3	7 2 5	6 7 5
Average for season	3 4 0	2 9 2	4 8 8	4 3 7	4 4 0	3 9 6	7 4 6	6 9 6

The above rates include canal tolls, as follows:

On wheat, per bushel, from Buffalo to Troy	01 0 3
On corn, per bushel, from Buffalo to Troy	00 9 6
On wheat, per bushel, from Oswego to Troy	00 5 9
On corn, per bushel, from Oswego to Troy	00 5 5

Highest rate, lake freight, from Chicago to Buffalo	5¼c. wheat.
Highest rate, lake freight, from Chicago to Oswego	7 c. wheat.
Highest rate, canal freight, from Buffalo to New York	7 c. wheat.
Highest rate, canal freight, from Oswego to New York	6 c. wheat.

STATEMENT showing the average rate of lake freight on wheat and corn between Chicago, Buffalo and Oswego; also the average rate of canal freight on the same articles between Buffalo, Oswego and New York, for each week during the season of canal navigation 1882.

PERIOD.	From Chicago to Buffalo		From Buffalo to N. Y.		From Oswego to N. Y.	
	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.
	c m. f.	c m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.
Second week in April	2 7 5	2 2 5	5 0 0	4 5 0	4 6 3	4 3 8
Third week in April	2 5 0	2 1 3	5 5 0	5 2 5	4 6 2	4 3 7
Fourth week in April	2 7 5	2 3 7	5 5 0	5 0 0	4 6 3	4 3 8
First week in May	2 5 0	2 1 5	5 3 7	4 8 7	4 5 6	4 3 1
Second week in May	2 2 5	2 0 0	5 0 7	4 5 7	4 5 0	4 2 5
Third week in May	2 2 5	2 0 0	4 9 6	4 4 6	4 2 5	4 0 0
Fourth week in May	2 2 5	2 0 0	4 4 5	4 0 0	4 1 6	3 9 1
First week in June	2 4 2	2 1 7	4 2 5	3 8 7	4 1 2	3 8 7
Second week in June	3 0 7	2 8 2	4 3 2	3 9 3	4 0 0	3 7 5
Third week in June	2 7 5	2 5 0	4 4 6	4 0 6	4 0 0	3 7 5
Fourth week in June	1 7 5	1 5 0	4 2 0	3 9 0	4 0 0	3 7 5
First week in July	1 0 0	1 0 0	4 1 7	3 9 0	4 0 0	3 7 5
Second week in July	2 0 7	1 8 2	4 2 1	3 8 7	3 7 5	3 5 0
Third week in July	2 2 5	1 9 2	4 2 5	3 8 8	3 7 5	3 5 0
Fourth week in July	2 4 0	2 1 5	4 8 7	4 3 7	3 7 5	3 5 0
First week in August	3 0 0	2 7 5	5 7 2	5 2 5	4 4 6	4 2 2
Second week in August	2 2 9	1 9 6	5 5 0	5 0 0	4 7 5	4 5 0
Third week in August	2 5 0	2 2 5	5 2 5	4 7 5	4 7 5	4 5 0
Fourth week in August	1 8 2	1 5 7	5 2 5	4 7 5	4 7 5	4 5 0
First week in September	2 2 5	2 0 0	5 6 5	5 1 5	4 7 5	4 5 0

STATEMENT showing the average rate of lake freight, etc.—(Continued).

PERIOD.	From Chicago to Buffalo		From Buffalo to N. Y.		From Oswego to N. Y.	
	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.
	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.
Second week in September	2 6 1	2 3 6	5 5 0	5 0 0	4 7 5	4 5 0
Third week in September	2 5 0	2 2 5	5 9 5	5 4 5	4 7 5	4 5 0
Fourth week in September	2 5 0	2 2 5	6 2 1	5 7 1	4 7 5	4 5 0
First week in October	2 5 0	2 2 5	5 9 6	5 4 6	4 7 5	4 5 0
Second week in October	2 7 5	2 5 0	7 2 2	6 7 0	5 5 0	5 1 3
Third week in October	2 8 4	2 5 9	7 3 7	6 8 7	6 1 6	5 6 9
Fourth week in October	3 5 0	3 0 0	6 5 0	6 0 0	5 5 0	5 0 0
First week in November	3 5 0	3 0 0	6 2 2	5 7 2	5 5 0	5 0 0
Second week in November	3 5 0	3 0 0	5 7 9	5 2 9	5 5 0	5 0 0
Third week in November	3 3 0	2 8 0	6 0 0	5 5 0	5 6 5	5 1 5
Fourth week in November	......	......	......	......	6 0 0	5 5 0

STATEMENT showing the average rate of lake freight on wheat and corn between Chicago and Buffalo; the average rate of canal freight on the same articles between Buffalo, Oswego and New York; and railroad freight from Buffalo to New York, for each month during the season of canal navigation, 1882.

PERIOD.	From Chicago to Buffalo		From Buffalo to N. Y.		From Oswego to N. Y.		Railroad from Buffalo to New York.	
	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.	Wheat per bushel 60 lbs.	Corn per bushel 56 lbs.
	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.	c. m. f.
April	2 6 6	2 2 5	5 3 3	4 9 2	4 6 3	4 3 8	9 0 0	8 5 0
May	2 3 1	2 0 4	4 9 6	4 4 7	4 3 6	4 1 2	9 0 0	8 5 0
June	2 5 0	2 2 5	4 3 1	3 9 4	4 0 3	3 7 8	9 0 0	8 5 0
July	1 9 3	1 7 2	4 3 8	4 0 0	3 8 1	3 5 6	9 0 0	8 5 0
August	2 4 0	2 1 3	5 4 3	4 9 4	4 6 8	4 4 3	9 0 0	8 5 0
September	2 4 6	2 2 2	5 8 3	5 3 3	4 7 5	4 5 0	9 0 0	8 5 0
October	2 9 0	2 5 8	6 7 6	6 2 6	5 4 8	5 0 8	9 0 0	8 5 0
November	3 4 3	2 9 3	6 0 0	5 5 0	5 5 5	5 0 5	9 0 0	8 5 0
Average for season	2 5 7	2 2 6	5 3 7	4 9 2	4 6 6	4 3 6	9 0 0	8 5 0

The above rates include canal tolls, as follows:

On wheat, per bushel, from Buffalo to Troy	01 0 3
On corn, per bushel, from Buffalo to Troy	00 9 6
On wheat, per bushel, from Oswego to Troy	00 5 9
On corn, per bushel, from Oswego to Troy	00 5 5

Highest rate, lake freight, from Chicago to Buffalo	3½ c. wheat.
Highest rate, lake freight, from Chicago to Oswego	8 c. wheat.
Highest rate, canal freight, from Buffalo to New York	8 c. wheat.
Highest rate, canal freight, from Oswego to New York	6¼ c. wheat.

TABLE SHOWING THE COST OF TRANSPORTATION ON THE CANALS.

The following table has been prepared to show the cost of transportation for a series of years, on down freight from Buffalo to Albany. It is designed to show the cost of carrying on the canal 216 pounds, or a barrel of flour. The first seven columns show the cost, including tolls; the eighth shows the average for the year; the ninth the tolls, and the tenth the forwarder's charge, or earnings after paying tolls:

Down freight, per bbl., 216 lbs. from Buffalo to Albany.

YEAR.	May.	June.	July.	August.	September.	October.	November.	Average for year.	Tolls deducted.	Leaving freight.
1830	$1 00	$0 99	$0 97	$0 86	$0 99	$1 01	$1 02	$0 98	$0 55	$0 43
1831	1 04	97	91	92	90	97	1 02	96	55	41
1832	1 10	97	90	97	1 00	1 00	1 06	1 00	55	45
1833	91	82	86	83	90	91	91	88	39	49
1834	87	78	78	81	85	85	88	83	35	48
1835	70	65	66	64	64	76	75	68	35	33
1836	80	78	72	72	76	80	80	77	35	42
1837	80	80	82	72	83	77	97	81	35	46
Annual average from 1830 to 1837, 8 years	$0 90	$0 84	$0 83	$0 81	$0 86	$0 88	$0 92	$0 86	$0 43	$0 43
1838	$0 80	$0 73	$0 71	$0 68	$0 73	$0 70	$0 76	$0 73	$0 35	$0 38
1839	68	67	65	65	78	87	1 00	75	35	41
1840	80	78	74	67	76	80	1 13	81	35	46
1841	75	65	68	63	66	73	85	71	35	36
1842	72	60	60	62	62	63	76	65	35	30
1843	80	60	59	57	58	62	70	60	35	25
1844	75	61	55	56	54	57	65	60	35	25
1845	55	55	54	57	55	53	96	71	35	26
Annual average from 1838 to 1845, 8 years	$0 73	$0 65	$0 63	$0 62	$0 65	$0 68	$0 85	$0 69	$0 35	$0 34
1846	$0 61	$0 61	$0 53	$0 54	$0 53	$0 58	$1 05	$0 64	$0 31	$0 33
1847	1 12	1 02	67	62	57	66	73	77	31	46
1848	54	51	54	54	52	66	72	58	31	27
1849	51	55	55	52	52	57	71	56	31	25
1850	51	51	53	54	53	59	81	57	31	26
1851	46	46	50	43	46	53	60	49	23	26
1852	47	47	51	47	54	58	68	53	23	30
1853	49	48	48	49	66	74	63	56	23	33
Annual average from 1846 to 1853, 8 years	$0 59	$0 58	$0 54	$0 52	$0 54	$0 61	$0 74	$0 59	$0 28	$0 31
1854	$0 56	$0 47	$0 51	$0 58	$0 52	$0 48	$0 61	$0 52	$0 23	$0 29
1855	47	53	46	44	51	57	65	52	23	29
1856	64	52	55	52	64	70	64	60	23	37
1857	59	44	45	43	44	50	49	46	23	23
1858	37	34	32	32	32	33	35	34	15	18
1859	27	28	30	28	31	36	37	31	15	16
1860	30	30	31	39	46	50	68	42	15	27
1861	39	32	32	35	49	59	76	46	19	27
Annual average from 1854 to 1861, 8 years	$0 45	$0 40	$0 40	$0 41	$0 46	$0 50	$0 57	$0 45	$0 19	$0 26
1862	$ 40	$0 38	$0 43	$0 46	$0 52	$0 55	$0 60	$0 48	$0 25	$0 25
1863	43	43	43	41	40	48	60	45	23	22
1864	50	56	61	66	56	57	57	47	23	34
1865	42	41	45	45	47	67	71	51	22	28
1866	38	51	55	50	54	53	60	52	23	29
1867	37	41	45	42	50	67	58	48	23	25
1868	45	42	42	43	51	54	62	48	23	25
1859	42	42	40	42	51	67	73	51	23	28
Annual average from 1862 to 1869, 8 years	$0 42	$0 43	$0 46	$0 47	$0 50	$0 58	$0 63	$0 49	$0 23	$0 27
1870	$0 31	$0 31	$0 30	$0 29	$0 41	$0 40	$0 36	$0 33	$0 11½	$0 21½
1871	36	31	35	37	44	45	52	40	11½	28½
1872	30	39	47	39	39	47	52	42	11½	30½
1873	38	32	32	33	39	40	40	36	11½	24½
1874	37	35	29	27	29	29	30	31	11½	19½
1875	22	20	22	24	20	24	33	23	07½	15½
1876	20	17	16	15	17	23	23	19	07½	11½
1877	16	13	13	19	21	33	32	21	04	17
1878	16	11	10	15	24	24	13	16	04	12
1879	12	11	14	18	24	27	32	20	04	16
1880	16	19	17	15	16	19	24	18	04	14
1881	17	11	10	9	12	13	12	12	04	08
1882	13	11	11	15	16	19	17	14	04	10
Annual average from 1870 to 1882, 13 years	21	22	22	23	26	30	30	25	7½	17½

The following table shows the cost of transportation on the canals on up freight from Albany to Buffalo, from 1830 to 1882 inclusive, for each month in the year during the season of navigation; the average cost of the year, the tolls charged upon 100 pounds of freight carried, and the average charges of the carrier. These prices are assumed and understood to cover the whole cost of transit to the shipper or consignee.

It will only be necessary to invite attention to the marked difference between the average of the first 16 and the last 37 years, embracing the whole period set down in the table.

Up freight, per 100 lbs., from Albany to Buffalo.

YEAR	May.	June.	July.	August.	Septemb'r.	October.	Novemb'r.	Av'age for year.	Tolls deducted.	Leaving freight.
1830	$1 00	$1 00	$1 00	$1 00	$1 00	$1 00	$1 00	$1 00	$0 51	$0 49
1831	1 00	1 00	1 00	98	97	99	99	99	51	48
1832	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	51	49
1833	92	79	70	69	69	67	73	74	44	36
1834	82	82	82	82	82	82	82	82	33	49
1835	80	80	80	80	80	80	80	80	33	47
1836	1 05	1 05	1 05	1 05	1 05	1 05	1 05	1 05	33	72
1837	1 05	1 06	1 01	90	84	75	88	93	33	60
Annual av. from 1830 to 1837, 8 years	$0 95	$0 94	$0 92	$0 90	$0 90	$0 88	$0 91	$0 92	$0 41	$0 51
1838	$0 85	$0 85	$0 88	$0 85	$0 85	$0 83	$0 88	$0 85	$0 33	$0 52
1839	87	81	76	81	90	90	90	85	33	52
1840	80	80	85	80	85	84	87	83	33	50
1841	68	63	59	47	50	58	81	61	33	28
1842	75	71	61	58	58	60	81	66	33	33
1843	56	55	51	46	51	61	72	56	33	23
1844	77	60	48	48	67	77	80	65	33	32
1845	51	44	48	44	49	47	50	48	33	15
Annual av. from 1838 to 1845, 8 years	$0 72	$0 67	$0 64	$0 61	$0 67	$0 70	$0 79	$0 69	$0 33	$0 36
1846	$0 38	$0 40	$0 41	$0 35	$0 37	$0 40	$0 40	$0 40	$0 24	$0 16
1847	39	39	39	39	39	39	39	39	24	15
1848	39	39	39	39	39	39	39	39	24	15
1849	39	39	39	39	39	39	39	39	24	15
1850	37	35	35	35	36	37	39	36	24	12
1851	31	31	30	30	31	31	32	31	22	9
1852	28	26	25	25	26	26	28	26	15	11
1853	28	28	28	28	28	28	28	28	15	13
Annual av. from 1846 to 1853, 8 years	$0 35	$0 34	$0 34	$0 34	$0 34	$0 35	$0 37	$0 35	$0 22	$0 13
1854	$0 25	$0 25	$0 25	$0 24	$0 24	$0 25	$0 26	$0 25	$0 15	$0 10
1855	25	25	25	25	25	26	27	25	15	11
1856	27	27	26	26	26	27	27	27	15	12
1857	24	24	25	24	24	24	24	24	15	9
1858	19	13	13	12	13	13	15	14	7	7
1859	12	12	12	12	12	12	12	12	3½	8¼
1860	12	12	12	12	12	12	12	12	7	5
1861	12	12	12	12	9	11	11	11	7	4
Annual av. from 1854 to 1861, 8 years	$0 20	$0 19	$0 19	$0 18	$0 18	$0 19	$0 19	$0 19	$0 11	$0 8
1862	$0 12	$0 12	$0 12	$0 12	$0 12	$0 13	$0 14	$0 12½	$0 07	$0 05½
1863	12	12	12	12	12	14	13	12½	07	05½
1864	12	12	12	12	14	14	14	13	05¼	07¾
1865	12	12	12	12	12	14	14	12½	05¼	07¼
1866	12	12	12	12	14	14	14	13	05¼	07¾
1867	12	12	12	12	14	14	14	13	05¼	07¾
1868	12	12	12	12	14	14	14	13	05¼	07¾
1869	12	12	12	12	14	14	14	13	05¼	07¾
Annual av. from 1862 to 1869, 8 years	$0 12	$0 12	$0 12	$0 12	$0 14	$0 14	$0 14	$0 13	$0 05¼	$0 07¾
1870	$0 12	$0 12	$0 12	$0 12	$0 14	$0 14	$0 14	$0 13	$0 05¼	$0 07¾
1871	12	12	12	12	14	14	14	13	05¼	07¾
1872	12	12	13	12	14	14	14	13	05¼	07¾
1873	12	12	12	12	14	14	14	13	05¼	07¾
1874	12	12	12	12	14	14	14	13	05¼	07¾
1875	12	12	12	12	14	14	14	13	05¼	07¾
1876	12	12	12	12	14	14	14.	13	05¼	07¾
1877	12	12	12	12	14	14	14	13	05¼	07¾
1878	12	12	12	12	14	14	14	13	05¼	07¾
1879	12	12	12	12	14	14	14	13	05¼	07¾
1880	07½	07½	07½	07½	07½	07½	07½	07½	9-10	06 3-5
1881	07½	07½	07½	07½	07½	07½	07½	07½	....	07½
1882	06	06	06	06	06	06	06	06	....	06
Annual av. from 1870 to 1882, 13 years	11	11	11	11	12	12	12	11	04	07

The following table exhibits the averages on up and down freight for the last fifty-three years, in periods of four years. The reduction from 1850 to 1853, and from 1858 to 1882, presents a very remarkable feature in canal transportation.

PERIOD.	Average charge on up freight per 100 lbs., from Albany to Buffalo.			Average charge on down freight, per bbl., 216 lbs., from Buffalo to Albany.		
	Tolls.	Freight.	Whole charge.	Tolls.	Freight.	Whole charge.
	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.
From 1830 to 1833, inclusive, 4 years	49	45	94	51	44	95
From 1834 to 1837, inclusive, 4 years	33	57	90	35	42	77
From 1838 to 1841, inclusive, 4 years	33	45	78	35	40	75
From 1842 to 1845, inclusive, 4 years	33	26	59	35	27	62
From 1846 to 1849, inclusive, 4 years	24	15	39	31	33	64
From 1850 to 1853, inclusive, 4 years	19	11	30	25	29	54
From 1854 to 1857, inclusive, 4 years	15	10	25	23	29	52
From 1858 to 1861, inclusive, 4 years	6	6	12	16	22	38
From 1862 to 1865, inclusive, 4 years	6	7	13	23	27	50
From 1866 to 1869, inclusive, 4 years	5¼	7¾	13	23	26	49
From 1870 to 1873, inclusive, 4 years	5¼	7¾	13	11½	26¼	37¾
From 1874 to 1877, inclusive, 4 years	5¼	7¾	13	7½	16	23½
From 1878 to 1882 inclusive, 5 years	2¼	7¼	9½	4	12	16
The per cent of reduction from the period ending with 1833 to the period ending with 1849, is	51	66	58	39	25	33
The per cent of reduction from the period ending with 1849 to the period ending with 1882, is	90	51	75	87	64	75
The per cent of reduction from the period ending with 1833 to the period ending with 1882, is	95	84	90	92	73	83

The following table presents the cost of transportation per ton on the canals during the period embraced in the preceding tables on up and down freight, the tolls paid to the State, and the carrier's charge.

YEAR.	UP FREIGHT PER TON FROM ALBANY TO BUFFALO.			DOWN FREIGHT PER TON FROM BUFFALO TO ALBANY.		
	Average per year.	Tolls deducted.	Leaving freight.	Average per year.	Tolls deducted.	Leaving freight.
1830	$20 00	$10 22	$9 78	$9 07	$5 11	$3 96
1831	10 80	10 22	9 58	8 89	5 11	3 78
1832	20 00	10 22	9 78	9 26	5 11	4 15
1833	14 80	8 76	6 04	8 15	3 65	4 50
1834	16 40	6 57	9 83	7 68	3 28	4 40
1835	16 00	6 57	9 43	6 29	3 28	3 01
1836	21 00	6 57	14 43	7 13	3 28	3 85
1837	18 00	6 57	12 03	7 50	3 28	4 22
Annual average from 1830 to 1837, 8 years	$18 32	$8 21	$10 11	$8 00	$4 01	$3 99
1838	$17 80	$6 57	$11 23	$6 76	$3 28	$3 48
1839	17 80	6 57	11 23	6 94	3 28	3 62
1840	16 20	6 57	10 03	7 50	3 28	4 22
1841	12 20	6 57	5 63	6 57	3 28	3 29
1842	13 20	6 57	6 63	6 02	3 28	2 74
1843	11 20	6 57	4 63	5 56	3 28	2 28
1844	13 00	6 57	6 43	5 56	3 28	2 28
1845	9 60	6 57	3 03	6 57	3 28	3 29
Annual average from 1838 to 1845, 8 years	$13 92	$6 57	$7 35	$6 43	$3 28	$3 15

YEAR.	UP FREIGHT PER TON FROM ALBANY TO BUFFALO.			DOWN FREIGHT PER TON FROM BUFFALO TO ALBANY.		
	Average per year.	Tolls deducted.	Leaving freight.	Average per year.	Tolls deducted.	Leaving freight.
1846	$8 00	$4 80	$3 20	$5 92	$2 92	$3 00
1847	7 80	4 80	3 00	7 13	2 92	4 21
1848	7 80	4 80	3 00	5 37	2 92	2 45
1849	7 80	4 80	3 00	5 18	2 92	2 26
1850	7 20	4 80	2 40	5 48	2 92	2 56
1851	6 20	4 40	1 80	4 71	2 19	2 52
1852	5 20	2 92	2 28	4 90	2 19	2 71
1853	5 60	2 92	2 68	5 18	2 19	2 99
Annual average from 1846 to 1853, 8 years	$6 95	$4 28	$2 67	$5 48	$2 64	$2 84
1854	$5 00	$2 92	$2 08	$4 81	$2 19	$2 62
1855	5 00	2 92	2 08	4 81	2 19	2 62
1856	5 40	2 92	2 48	5 56	2 19	3 37
1857	4 80	2 92	1 88	4 26	2 19	2 07
1858	2 80	1 46	1 34	3 14	1 46	1 68
1859	2 40	0 70	1 70	2 87	1 41	1 46
1860	2 40	1 40	1 00	3 88	1 41	2 47
1861	2 20	1 40	0 80	4 26	1 76	2 50
Annual average from 1854 to 1861, 8 years	$3 75	$2 08	$1 67	$4 20	$1 85	$2 35
1862	$2 50	$1 40	$1 10	$4 42	$2 11	$2 31
1863	2 50	1 40	1 10	4 17	2 11	2 06
1864	2 60	1 05	1 55	5 32	2 11	3 21
1865	2 50	1 05	1 45	4 72	2 11	2 61
1866	2 60	1 05	1 55	4 82	2 11	2 71
1867	2 60	1 05	1 55	4 44	2 11	2 33
1868	2 60	1 05	1 55	4 44	2 11	2 33
1869	2 60	1 05	1 55	4 72	2 11	2 61
Annual average from 1862 to 1869, 8 years	$2 56	$1 14	$1 40	$4 63	$2 11	$2 52
1870	$2 60	$1 05	$1 55	$3 06	$1 05	$2 01
1871	2 60	1 05	1 55	3 70	1 05	2 65
1872	2 60	1 05	1 55	3 70	1 05	2 65
1873	2 60	1 05	1 55	3 33	1 05	2 28
1874	2 60	1 05	1 55	2 78	1 05	1 73
1875	2 60	1 05	1 55	2 13	0 70	1 43
1876	2 60	1 05	1 55	2 04	0 70	1 34
1877	2 60	1 05	1 55	1 94	0 37	1 57
1878	2 60	1 05	1 55	1 48	0 37	1 11
1879	2 60	1 05	1 55	1 85	0 37	1 48
1880	1 50	0 18	1 32	1 70	0 35	1 35
1881	1 50	....	1 50	1 11	0 37	0 74
1882	1 20	....	1 20	1 29	0 37	0 92
Annual average from 1870 to 1882, 13 years	$2 32	$0 82	$1 50	$2 32	$0 68	$1 64
Annual average from 1830 to 1882, 53 years	$7 43	$3 56	$3 87	$4 92	$2 27	$2 65
Average from 1830 to 1833, 4 years.	$18 65	$9 85	$8 80	$8 84	$4 74	$4 10
Average from 1834 to 1837, 4 years	18 00	6 57	11 43	7 15	3 28	3 87
Average from 1838 to 1841, 4 years	16 10	6 57	9 53	6 94	3 28	3 66
Average from 1842 to 1845, 4 years.	11 75	6 57	5 18	5 93	3 28	2 65
Average from 1846 to 1849, 4 years	7 85	4 80	3 05	5 90	2 92	2 98
Average from 1850 to 1853, 4 years.	6 05	3 76	2 29	5 07	2 37	2 70
Average from 1854 to 1857, 4 years.	5 05	2 92	2 13	4 86	2 19	2 67
Average from 1858 to 1861, 4 years,	2 45	1 24	1 21	3 54	1 51	2 03
Average from 1862 to 1865, 4 years.	2 52	1 22	1 30	4 66	2 11	2 55
Average from 1 66 to 1869, 4 years.	2 60	1 05	1 55	4 61	2 11	2 50
Average from 1870 to 1873, 4 years.	2 60	1 05	1 55	3 45	1 05	2 40
Average from 1874 to 1877, 4 years,	2 60	1 05	1 55	2 22	70	1 52
Average from 1878 to 1882, 5 years,	1 88	46	1 42	1 48	36	1 12

The following table has been prepared for the purpose of showing the whole cost of transportation upon the canals for the last forty-six years, distinguishing between the toll which goes to the State and the charge over toll which goes to the carrier. The toll on up freight or merchandise has been received each year by the collectors of tolls, and is shown in column No. 1. No. 2 is the amount in each year, after deducting the toll on merchandise from the gross toll, and represents the toll on down freight. No. 3 is the gross toll each year. No. 4 bears the same proportion to No. 1 as the carrier's portion of the "whole charge" on up freight or merchandise bears to the toll in each year, as shown by the preceding table of prices; and so of No. 5. The amount opposite each year in it bears the same proportion to the amount opposite the corresponding year in No. 2, as the carrier's portion of the whole charge on a barrel of flour in that year bore to the toll in the same year. No. 6 is the carrier's portion each year, and added to No. 3 shows the whole cost of transportation on the business of each year:

YEAR.	TOLLS TO THE STATE.			CHARGE OVER TOLL TO CARRIERS.		
	1. On up freight, merchandise.	2. On down freight, produce.	3. Total.	4. On up freight, merchandise.	5 On down freight, produce.	6. Total.
1837	$280,826	$911,797	$1,292,623	$692,411	$1,198,362	$1,890,773
1838	526,911	1,064,000	1,590,912	830,284	1,155,200	1,985,484
1839	535,486	1,080,896	1,616,382	843,796	1,266,193	2,109,989
1840	427,966	1,347,781	1,775,747	648,433	1,771,369	2,419,802
1841	558,003	1,476,879	2,034,882	473,457	1,519,075	1,992,532
1842	393,875	1,355,321	1,749,196	393,875	1,161,703	1,555,578
1843	502,617	1,578,973	2,081,590	350,309	1,127,838	1,478,147
1844	585,147	1,861,227	2,446,374	567,415	1,329,448	1,896,863
1845	625,900	2,020,281	2,646,181	284,500	1,500,780	1,785,280
1846	546,227	2,209,879	2,756,106	364,151	2,352,452	2,716,603
1847	670,979	2,964,402	3,635,381	419,362	4,398,790	4,818,152
1848	779,420	2,472,973	3,252,393	487,137	2,153,870	2,641,007
1849	769,913	2,498,313	3,268,226	481,195	2,014,768	2,495,963
1850	756,877	2,517,022	3,273,899	378,438	2,111,051	2,489,489
1851	877,438	2,452,289	3,329,727	358,951	2,713,171	3,072,122
1852	674,881	2,443,363	3,118,244	494,913	3,186,995	3,681,908
1853	719,762	2,484,956	3,204,718	623,794	3,565,372	4,189,166
1854	638,039	2,135,527	2,773,566	454,494	2,554,795	3,009,289
1855	660,105	2,144,972	2,805,077	470,212	2,566,131	3,036,343
1856	585,891	2,162,321	2,748,212	497,606	3,327,407	8,825,013
1857	342,410	1,703,231	2,045,641	220,456	1,609,903	1,830,359
1858	159,439	1,951,315	2,110,754	146,334	2,245,349	2,391,683
1859	112,542	1,611,403	1,723,945	273,316	1,668,545	1,941,861
1860	223,885	2,785,712	3,009,597	159,918	4,879,935	5,039,852
1861	107,958	3,800,827	3,908,785	61,691	5,398,902	5,460,593
1862	161,556	5,027,387	5,188,943	126,937	5,464,551	5,591,488
1863	137,253	4,507,954	4,645,207	107,842	4,311,956	4,419,798
1864	117,692	3,886,290	3,983,982	173,736	5,881,891	6,055,627
1865	111,879	3,728,076	3,839,955	154,500	4,611,506	4,766,006
1866	131,021	4,305,618	4,436,639	193,412	5,530,000	5,723,412
1867	163,368	3,924,690	4,088,058	241,162	4,333,899	4,575,061
1868	206,395	4,040,168	4,246,563	304,678	4,461,418	4,766,096
1869	166,160	3,612,341	3,778,501	245,284	4,468,346	4,713,630
1870 ...	132,155	2,479,423	2,611,578	195,086	4,746,324	4,941,410
1871	140,199	2,960,639	3,100,838	206,960	7,472,089	7,679,049
1872	160,703	2,911,708	3,072,411	237,228	7,339,072	7,576,300
1873	79,646	2,897,072	2,976,718	117,572	6,290,785	6,408,357
1874	60,110	2,576,961	2,637,071	89,686	4,245,850	4,335,536
1875	27,374	1,562,658	1,590,032	40,409	3,232,696	3,273,105
1876	14,233	1,325,771	1,340,004	21,911	2,537,904	2,558,915
1877	14,233	866,663	800,896	21,011	3,937,126	3,958,137
1878	24,197	969,151	993,348	35,719	2,907,453	2,943,172
1879	94,008	847,566	941,574	138,773	3,390,264	3,529,037
1880	108,456	1,046,963	1,155,419	795,344	4,038,182	4,833,526
1881	....	632,390	632,390	1,993,063	1,264,780	3,257,843
1882	. .. .	655,826	655,826	1,575,105	1,798,049	3,373,154
Total 46yrs	$15,213,135	$105,780,975	$120,994,110	$17,990,013	$151,041,545	$169,031,558
Yearly av.	$330,720	$2,299,587	$2,630,307	$391,087	$3,283,512	$3,674,599

These tolls are often called a tax levied by the State on commerce. They are as much and no more a tax on commerce than the freight charges from New York to Liverpool, or from Albany to Buffalo by railway. The State has furnished a common highway for the transportation of freight in boats, and claims to be remunerated for the use of it by a small toll, much below any other artificial method of transportation by land or water.

The following table shows the total tons of transportation, the total cost of transportation, including toll and freight, and the difference each year between toll and freight:

YEAR.	Tons.	Toll to the State.	Freight to carrier.	Total tolls and freight.	Freight more than toll.	Freight less than toll.
1837	1,171,296	$1,292,623	$1,890,773	$3,183,396	$598,150	....
1838	1,333,011	1,590,911	1,985,484	3,576,395	394,573	....
1839	1,435,713	1,616,382	2,109,989	3,726,371	493,607	....
1840	1,416,046	1,775,747	2,419,802	4,195,549	644,055	....
1841	1,521,661	2,034,882	1,992,532	4,027,414	....	$42,350
1842	1,236,931	1,749,196	1,555,578	3,304,774	....	193,618
1843	1,513,439	2,081,590	1,478,147	3,559,737	....	603,443
1844	1,816,586	2,446,374	1,896,863	4,343,237	....	549,511
1845	1,985,011	2,646,181	1,785,280	4,431,461	....	860,901
1846	2,268,662	2,756,106	2,716,603	5,472,709	....	39,503
1847	2,869,810	3,635,381	4,818,152	8,453,533	1,182,771	....
1848	2,796,230	3,252,293	2,641,007	5,893,400	....	611,386
1849	2,894,732	3,268,226	2,495,963	5,764,189	....	772,263
1850	3,076,616	3,273,899	2,489,489	5,763,388	....	784,410
1851	3,582,733	3,329,727	3,072,122	6,401,849	....	257,605
1852	3,863,441	3,118,244	3,681,908	6,800,152	563,664	....
1853	4,247,853	3,204,718	4,189,166	7,393,884	984,448	....
1854	4,165,862	2,773,566	3,009,289	5,782,855	235,723	....
1855	4,022,617	2,805,077	3,036,343	5,841,420	231,266	....
1856	4,116,082	2,748,212	3,825,013	6,573,225	1,076,801	....
1857	3,344,061	2,045,641	1,830,359	3,876,000	....	215,282
1858	3,655,192	2,110,754	2,391,683	4,502,437	280,929	....
1859	3,781,684	1,723,945	1,941,861	3,665,806	217,916	....
1860	4,650,214	3,099,597	5,039,853	8,049,450	2,030,256	....
1861	4,507,635	3,908,785	5,460,593	9,369,378	1,551,808	....
1862	5,598,785	5,188,943	5,591,488	10,780.431	402,545	....
1863	5,557,692	4,645,207	4,419,798	9,065,005	....	225,409
1864	4,852,941	3,983,982	6,055,627	10,939,609	2,071,645	....
1865	4,729,654	3,839,955	4,766,0[illegible]6	8,605,961	926,051	....
1866	5,775,220	4,436,639	5,723,412	10,160,051	1,286,773	....
1867	5,688,325	4,088,058	4,575,061	8,663,119	487,003	....
1868	6,442,225	4,246,563	4,766,096	9,012,659	519.533	....
1869	5,859,080	3,778,501	4,713,630	8,492,131	935,129	....
1870	6,173,769	2,611,578	4,941,410	7,552,988	2,329,832	....
1871	6,467,888	3,100,838	7,679,049	10,779,887	4,578,211	....
1872	6,673,370	3,072,411	7,576,300	10,648,711	4,503,889	....
1873	6,364,782	2,976,718	6,408,357	9,385,075	3,431,639	....
1874	5,804,588	2,637,071	4,335,536	6,972,607	1,698,465	....
1875	4,859,858	1,590,032	3,273,105	4,863,137	1,683,073	....
1876	4,172,129	1,340,004	2,558,915	3,898,919	1,218,911	....
1877 .. .	4,955,963	880,896	3,958,137	4,839,033	3,077,241	....
1878	5,171,320	993,348	2,943,172	3,936,520	1,049,824	....
1879	5,362,372	941,584	3,529,037	4,470,611	2,587,463	....
1880	6,457,656	1,155,419	4,833,526	5,988,945	3,678,107	....
1881	5,179,192	632,390	3,257,843	3,890,233	2,625,453	....
1882	5,467,423	655,826	3,373.154	4,028,980	2,717,328	....
Total....	188,889,905	$120,987,763	$170,038,674	$291,026,437	$52,686,082	$5,155,681

The table approximates, with a fair degree of accuracy, to the gross cost of transportation, distinguishing between what goes to the State and what goes to the carrier.

For the forty-six years the whole cost of transportation appears to have been	$291,026,437
Deduct carrier's charge	170,038,374
And it leaves a sum of .... as a toll belonging to the State, and which has gone into the treasury.	$120,987,763
Deduct the cost of repairs, etc., of canals, for the same term....................	46,720,137
And it leaves the sum of	$74,267,626

as a charge upon the traffic on the canals beyond the cost of their support and maintenance, equal to $1,614,514 per annum for the forty-six years. This is a charge upon the transportation on the canals, imposed to pay the interest and principal of the debt incurred for the purposes connected with them; but it by no means follows that if there had been no dues to the State for the use of the canals, the carrier's charges would have been limited to the sums paid to him for his services.

The following table shows for a series of years the total charge on 100 tons up, and 100 tons down; the tons arriving at tide water from the Erie canal; the average cargoes of boats, and the lockages at Alexander's lock:

YEAR.	Tolls on 100 tons each way.	Freight on 100 tons each way.	Total charge.	Tons from Erie canal.	Average cargoes of boats.	Lockages at Alexander's lock.
1830	$1,530	$1,378	$2,908	....	....	......
1831	1,530	1,339	2,869	....	....	......
1832	1,530	1,397	2,927	....	...	......
1833	1,241	1,174	2,415	....	...	......
1834	987	1,424	2,411	....	....	......
1835	987	1,245	2,232	497,830	38	25,798
1836	987	1,829	2,816	419,125	33	25.516
1837	987	1,626	2,613	387,506	....	21,055
1838	987	1,392	2,379	419,249	32	25,962
1839	987	1,419	2,406	386,267	32	24,234
1840	987	1,426	2,413	467,315	34	26,987
1841	987	893	1,880	532,520	35	20,320
1842	987	938	1,925	480.149	42	22,869
1843	987	691	1,678	635,345	55	23,184
1844	987	871	1,858	799,816	56	28,219
1845	987	541	1,528	959,590	63	30,452
1846	771	625	1,396	1,107,270	66	33,431
1847	771	726	1,497	1,431,252	65	43,957
1848	771	550	1,321	1,184.337	68	34,911
1849	771	531	1,302	1,266,724	68	36,918
1850	771	481	1,252	1,371,859	80	38.444
1851	658	421	1,079	1,508,677	75	40,396
1852	509	507	1.016	1,644,699	80	41,572
1853	511	567	1,078	1,851,438	84	42,967
1854	511	470	981	1,702,693	24	35.981
1855	511	470	981	1,420,715	92	30.873
1856	511	385	1,096	1,587,130	100	31,223
1857	511	395	906	1,117,199	100	22,182
1858	282	302	584	1,496,687	126	23,474
1859	211	316	527	1,451,333	143	31,905
1860	282	347	629	2,276,061	140	32,439
1861	316	339	646	2,449,609	157	31,179
1862	351	341	692	2,917.094	167	34,977
1863	351	314	665	2,647,689	177	30,071
1864	316	476	792	2,146,634	150	28,742
1865	316	406	722	2,078,361	160	26,037
1866	316	426	742	2,523,664	170	29,882
1867	316	387	703	2,226,112	156	28.654
1868	316	388	704	2,378,572	148	32,107
1869	316	416	732	2.257.689	183	24.625
1870	210	356	566	2,290,698	181	25,124
1871	210	420	630	2,648,877	178	29,725
1872	210	420	630	2,670,405	190	28,035
1873	210	383	593	2,585,355	207	24,960
1874	210	328	538	2,470,297	197	24,085
1875	175	298	473	1,914,942	204	18,761
1876	175	289	464	1,745,320	209	16.671
1877	142	312	454	2,298.008	214	21,408
1878	142	266	408	2,831,790	215	26,340
1879	142	303	445	2,546,002	197	25,916
1880	51	267	318	3,226.358	215	29,983
1881	37	224	261	2,193,302	216	20,244
1882	37	213	250	2,102,440	193	21,808

MOVEMENT OF TRADE.

The Comptroller will now submit a series of comparative statements of the movement of freight on the two railways connecting New York with Lake Erie and the State canals, during the last twenty-seven years, showing the tons carried each year, the total movement of number of tons moved one mile, and the freight and tolls received therefrom.

This statement shows the tons of total movement on the lines named for twenty-seven years, the freight paid to the roads, and the tolls paid to the State, and carrier's charge on the canals with the tolls.

1856.	Tons moved one mile.	Freight and tolls.	Average per ton one mile.
New York Central railroad	145,733,678	$4,328,041	2.97 cents.
New York and Erie railroad	183,458,046	4.545,782	2.48 "
Canals	592,009,603	6,573,225	1.11 "
Totals	921,201,327	$15,447,048	1.67 cents.
1857.			
New York Central railroad	145,773,791	$4,559,276	3.13 cents.
New York and Erie railroad	167,100,850	4,097,610	2.45 "
Canals	484,750,864	3,876,000	7.99 mills.
Totals	797,725,505	$12,532,886	1.57 cents.
1858.			
New York Central railroad	142,691,178	$3,700,270 44	2.59 cents.
New York and Erie railroad	165,895,635	3,843,310 77	3.32 "
Canals	564,842,095	4,502,437 00	7.97 mills.
Totals	873,428,908	$12,046,018 21	1.38 cents.
1859.			
New York Central railroad	157,136,000	$3,337,148	2.13 cents.
New York and Erie railroad	147,127,039	3,195,869	2.17 "
Canals	544,309,072	3,665,806	6.72 mills.
Totals	848,572,111	$10,198,823	1.19 cents.
1860.			
New York Central railroad	199,231,392	$4,095,934	2.06 cents.
New York and Erie railroad	214,084,395	3,884,343	1.84 "
Canals	809,524,596	8,049,450	9.94 mills.
Totals	1,222,840,383	$16,029,727	1.31 cents.
1861.			
New York Central railroad	237,392,974	$4,644,449	1.96 cents.
New York and Erie railroad	251,350,127	4,351,464	1.73 "
Canals	863,623,507	9,369,378	1.08 "
Totals	1,352,366,608	$18,365,291	1.36 cents.
1862.			
New York Central railroad	296,963,492	$6,607,331	2.22 cents.
Erie railway	351,092,285	6,642,915	1.89 "
Canals	1,123,548,430	10,780,431	9.59 mills.
Totals	1,771,604,207	$24,030,677	1.36 cents.

1863.	Tons moved one mile.	Freight and tolls.	Average per ton one mile
New York Central railroad	312,195,796	$7,498,509	2.40 cents.
Erie railway	403,670,861	8,432,234	2.09 "
Canals	1,034,130,023	9,065,005	8.76 mills.
Totals	1,719,996,680	$24,995,748	1.45 cents.
1864.			
New York Central railroad	314,081,410	$8,543,370	2.75 cents
Erie railway	422,013,644	9,855,087	2.31 "
Canals	871,335,150	10,039,609	1.15 "
Totals	1,607,430,204	$28,438,066	1.77 cents.
1865.			
New York Central railroad	264,993,626	$8,776,028	3.31 cents.
Erie railway	388,557,213	10,726,264	2.76 "
Canals	843,915,779	8,605,961	1.10 "
Totals	1,497,466,618	$28,108,253	1.85 cents.
1866.			
New York Central railroad	331,075,547	$9,671,920	2.92 cents.
Erie railway	478,485,772	11,611,023	2,45 "
Canals	1,012,448,034	10,160,051	1.00 "
Totals	1,822,209,353	$31.442,994	1.73 cents.
1867.			
New York Central railroad	362,180,606	$9.151,750	2.53 cents.
Erie railway	549,888.422	11,204,689	2.04 "
Canals	958,362,953	8,663,119	.90 "
Totals	1,870,431,981	$29,019,558	1.55 cents.
1868.			
New York Central railroad	366,199.786	$9,491,427	2.59 cents.
Erie railway	595.699,225	11,425,739	1.92 "
Canals	1,033,751,268	9,012,659	.88 "
Totals	1,995,650,279	$29,929,825	1.49 cents.
1869.			
New York Central railroad	474,419,726	$10,457,582 00	2.20 cents.
Erie railway	817,829,190	13,046.804 00	1.60 "
Canals	919,153,611	8,492,131 00	.92 "
Totals	2,211,402,527	$31,996,517 00	1.57 cents.
1870.			
New York Central railroad	769,087,777	$14,327,418 00	1.86 cents.
Erie railway	898,862,718	12,328.027 00	1.37 "
Canals	904,351,572	7,552,988 00	.83 "
Totals	2,572,302,067	$34,208,433 00	1.33 cents.
1871.			
New York Central railroad	888,327,865	$14,647,580 00	1.65 cents.
Erie railway	897,446,728	13,232,235 00	1.47 "
Canals	1,050,104,125	10,775,887 00	1.02 "
Totals	2,835,878,718	$38,659,702 00	1.36 cents.
1872.			
New York Central railroad	1,020,908,885	$16,259,647 00	1.69 cents.
Erie railway	950,708,902	14,509,745 00	1.52 "
Canals	1,048,575,911	10,648,711 00	1.02 "
Totals	3,020,193,698	$41,418,103 00	1.37 cents.

1873.	Tons moved one mile.	Freight and tolls.	Average per ton one mile.
New York Central railroad	1,246,650,063	$19,616,018 00	1.57 cents.
Erie railway	1,032,986,809	15,015,808 00	1.45 “
Canals	1,057,711,089	9,267,503 00	.88 “
Totals	3,336,347,961	$45,047,298 00	1.35 cents.
1874.			
New York Central railroad	1,391,560,707	$20,348,725 23	1.47 cents.
Erie railway	1,047,420,238	13,740,042 44	1.31 “
Canals	938,774,141	6,882,921 00	.73 “
Totals	3,377,755,086	$40,971,688 67	1.21 “
1875.			
New York Central railroad	1,404,008,029	$17,899,702 00	1.27 cents.
Erie railway	1,016,618,050	12,287,400 00	1.21 “
Canals	727,597,364	4,863,137 00	.66 “
Totals	3,148,223,443	$35,050,239 00	1.11 cents.
1876.			
New York Central railroad	1,674,447,055	$17,593,265 00	1.05 cents.
Erie railway	1,040,431,921	11,429,930 00	1.07 “
Canals	570,969,064	3,898,919 00	.68 “
Totals	3,285,848,040	$32,901,103 00	1.00 cent.
1877.			
New York Central railroad	1,619,948,685	$16,424,316 00	1.02 cents.
Erie railway	1,114,586,220	10,647,807 00	.96 “
Canals	857,305,563	4,839,033 00	.57 “
Totals	3,591,840,468	$31,911,156 00	.89 cent.
1878.			
New York Central railroad	2,084,355,368	$19,045,830 00	.91 cent.
Erie railway	1,224,764,438	11,914,489 00	.97 “
Canals	937,789,464	3,936,520 00	.42 “
Totals	4,246,909,270	$34,896.839 00	.83 cent.
1879.			
New York Central railroad	2,295,827,387	$18,270,250 00	.80 cent.
Erie railway	1,569,222,417	12,233,481 00	.78 “
Canals	962,908,600	4,470,611 00	.46 “
Totals	4,827,958,404	$34,974,342 00	.72 cent.
1880.			
New York Central railroad	2,525,139,145	$22,199,966 00	.88 cent.
Erie railway	1,721,112,095	14,391,115 00	.84 “
Canals	1,223,599,087	5,988,945 00	.49 “
Totals	5,469,850,327	$42,580,026 00	.78 cent.
1881.			
New York Central railroad	2,705,165,840	$20,736,750 00	.77 cent.
Erie railway	1,984,394,855	15,979,577 00	.81 “
Canals	*563,498,886	3,890,233 00	†.38 “
Totals	5,253,059,581	$40,606,560 00	.61 cent.
1882.			
New York Central railroad	2,394,799,310	$17,672,252 00	.74 cent.
Erie railway	1,954,389,710	15,080,630 00	.77 “
Canals	*582,033,028	*2,453,875 00	*.42 “
Totals	4,931,222,048	$35,206,757 00	.71 cent.

* Includes only the tonnage which paid toll.
† For the entire movement, property not paying toll included.

The following table shows the separate tonnage of the canals and two railroads, and the aggregate of both for thirty years, from 1853 to 1882, inclusive, with the losses and gains of each compared with the preceding year:

CANALS AND RAILROADS.	1853.	1854.	Gain in 1854.	Loss in 1854
New York canals, tons	4,247,853	4,165,862	....	81,991
New York Central railroad, tons	360,000	549,804	189,804	....
New York and Erie railroad, tons	631,039	743,250	112,211	....
	5,238,892	5,458,916	302,015	81,991
	1854.	1855.	Gain in 1855.	Loss in 1855.
New York canals, tons	4,165,862	4,022,617	....	143,245
New York Central railroad, tons	549,804	670,073	120,269	....
New York and Erie railroad, tons	743,250	842,948	19,798	....
	5,458,916	5,534,738	219,067	143,245
	1855.	1856.	Gain in 1856.	Loss in 1856.
New York canals, tons,	4,022,617	4,116,084	93,465	....
New York Central railroad, tons	670,073	776,112	106,039	....
New York and Erie railroad, tons	842,046	943,215	101,167	....
	5,534,738	5,835,409	300,671	....
	1856.	1857.	Gain in 1857.	Loss in 1857.
New York canals, tons	4,116,082	3,344,061	....	772,021
New York Central railroad, tons	776,112	838,791	62,679	....
New York and Erie railroad, tons	943,215	978,066	34,851	....
	5,835,409	5,160,918	97,530	772,021
	1857.	1858.	Gain in 1858.	Loss in 1858.
New York canals, tons,	3,344,061	3,665,192	321,131	....
New York Central railroad, tons	838,791	765,407	....	73,284
New York and Erie railroad, tons	978,066	816,054	....	161,112
	5,160,918	5,247,553	321,131	234,496
	1858.	1859.	Gain in 1859.	Loss in 1859.
New York canals, tons	3,665,192	3,781,684	116,492	....
New York Central railroad, tons	765,407	834,319	68,912	....
New York and Erie railroad, tons	816,954	869,073	53,119	....
	5,247,553	5,485,076	238,523	....
	1859.	1860.	Gain in 1860.	Loss in 1860.
New York canals, tons	3,781,684	4,650,214	868,530	....
New York Central railroad, tons	834,319	1,028,183	193,864	....
New York and Erie railroad, tons	868,073	1,139,554	270,481	....
	5,485,076	6,817,951	1,332,875	....
	1860.	1861.	Gain in 1861.	Loss in 1861.
New York canals, tons	4,050,214	4,507,635	....	142,579
New York Central railroad, tons	1,028,183	1,167,302	139,119	....
New York and Erie railroad, tons	1,139,554	1,253,418	113,864	....
	6,817,951	6,928,355	262,983	142,579
	1861.	1862.	Gain in 1862.	Loss in 1862.
New York canals, tons	4,507,635	5,598,785	1,091,150	....
New York Central railroad, tons	1,167,302	1,387,433	220,131	....
Erie railway, tons	1,253,418	1,632,955	379,537	....
	6,928,355	8,619,173	1,690,818	....
	1862.	1863.	Gain in 1863.	Loss in 1863.
New York canals, tons	5,598,785	5,557,692	....	41,093
New York Central railroad, tons	1,387,433	1,449,604	62,171	....
Erie railway, tons	1,632,955	1,815,096	182,141	....
	8,619,173	8,822,392	244,312	41,093

CANALS AND RAILROADS.	1863.	1864.	Gain in 1864.	Loss in 1864.
New York canals, tons	5,557,692	4,852,941		704,751
New York Central railroad, tons	1,449,604	1,557,148	107,544	
Erie railway, tons	1,815,096	2,170,798	355,702	
	8,822,392	8,580,887	463,246	704,751
	1864.	1865.	Gain in 1865.	Loss in 1865.
New York canals, tons	4,852,941	4,729,654		123,287
New York Central railroad, tons	1,557,148	1,275,299		281,849
Erie railway, tons	2,170,798	2,234,350	63,552	
	8,580,887	8,239,303	63,552	405,136
	1865.	1866.	Gain in 1866.	Loss in 1866.
New York canals, tons	4,729,654	5,775,220	1,045,566	
New York Central railroad, tons	1,275,299	1,602,197	326,898	
Erie railway, tons	2,234,350	3,242,792	1,008 442	
	8,239,303	10,620,209	2,380,906	
	1866.	1867.	Gain in 1867.	Loss in 1867.
New York canals, tons	5,775,220	5,688,325		86,895
New York Central railroad, tons	1,602,197	1,667,926	65,729	
Erie railway, tons	3,242,792	3,484,546	241,754	
	10,620,209	10,840,797	307,483	86,895
	1867.	1868.	Gain in 1868.	Loss in 1868.
New York canals, tons	5,688,325	6,442,225	753,900	
New York Central railroad, tons	1,667,926	1,846,599	178,673	
Erie railway, tons	3.484,546	3,908,243	423,697	
	10,840,797	12,197,067	1,356,270	
	1868.	1869.	Gain in 1869.	Loss in 1869.
New York canals, tons	6,442,225	5,859,080		583,145
New York Central railroad, tons	1,846,599	2,281,885	435,286	
Erie railway, tons	3,908,243	4,312,209	403,966	
	12,197,067	12,453,174	839,252	583,145
	1869.	1870.	Gain in 1870.	Loss in 1870.
New York canals, tons	5,859,080	6,173,769	314,689	
New York Central railroad, tons	2,281,885	4,122,000	1,840,115	
Erie railway, tons	4,312,209	4,852,505	540,296	
	12,453,174	15,148,274	2,695,100	
	1870.	1871.	Gain in 1871.	Loss in 1871.
New York canals, tons	6,173,769	6,467,888	294,119	
New York Central railroad, tons	4,122,000	4,532,056	410,056	
Erie railway, tons	4,852,505	4,844,208		8,297
	15,148,274	15,844,152	704,175	8,297
	1871.	1872.	Gain in 1872.	Loss in 1872.
New York canals, tons	6,467,888	6,673,370	205,482	
New York Central railroad, tons	4,532,056	4,393,965		138,091
Erie railway, tons	4,844,208	5,564,274	720,066	
	15,844,152	16,631,609	925,548	138,091
	1872.	1873.	Gain in 1873.	Loss in 1873.
New York canals, tons	6,673,370	6,364,782		308,588
New York Central railroad, tons	4,393,965	5,522,724	1,128,759	
Erie railway, tons	5,564,274	6,312,702	748,430	
	16,631,609	18,200,208	1,877,189	308,588
	1873.	1874.	Gain in 1874.	Loss in 1874.
New York canals, tons	6,364,782	5,804,588		560,194
New York Central railroad, tons	5,522,724	6.114,678	591,954	
Erie railway, tons	6,312,702	6,364,276	51,574	
	18,200,208	18,283,542	643,528	560,194

CANALS AND RAILROADS.	1874.	1875.	Gain in 1875.	Loss in 1875.
New York canals, tons	5,804,588	4,859,858	....	944,730
New York Central railroad, tons	6,114,678	6,001,954	....	112,724
Erie railway, tons	6,364,276	6,239,946	....	124,330
	18,283,542	17,101,758	....	1,181,784
	1875.	1876.	Gain in 1876.	Loss in 1876.
New York canals, tons	4,859,858	4,172,129	....	687,729
New York Central railroad, tons	6,001,954	6,803,680	801,726	....
Erie railway, tons	6,239,946	5,972,818	....	267,128
	17,101,758	16,948,627	801,726	954,857
	1876.	1877.	Gain in 1877.	Loss in 1877.
New York canals, tons	4,172,129	4,955,963	783,834	....
New York Central railroad, tons	6,803,680	6,351,356	....	452,324
Erie railway, tons	5,972,818	6,182,451	209,633	....
	16,948,627	17,489,770	993,467	452,324
	1877.	1878.	Gain in 1878.	Loss in 1878.
New York canals, tons	4,955,963	5,171,320	215,357	....
New York Central railroad, tons	6,351,356	7,695,413	1,344,057	....
Erie railway, tons	6,182,451	6,150,568	....	31,883
	17,489,770	19,017,301	1,559,414	31,883
	1878.	1879.	Gain in 1879.	Loss in 1879.
New York canals, tons	5,171,320	5,362,372	191,052	....
New York Central railroad, tons	7,695,413	9,015,753	1,320,340	....
Erie railway, tons	6,150,568	8,212,641	2,062,073	....
	19,017,301	22,590,766	3,573,465	....
	1879.	1880.	Gain in 1880.	Loss in 1880.
New York canals, tons	5,362,372	6,457,656	1,095,284	....
New York Central railroad, tons	9,015,753	10,533,038	1,517,285	....
Erie railway, tons	8,212,641	8,715,892	503,251	....
	22,590,766	25,706,586	3,115,820	....
	1880.	1881.	Gain in 1881.	Loss in 1881.
New York canals, tons	6,457,656	5,179,192	....	1,278,464
New York Central railroad, tons	10,533,038	11 591,379	1,058,341	....
Erie railway, tons	8,715,892	11,086,823	2,370,931	....
	25,706,586	27,857,394	3,429,272	1,278,464
	1881.	1882.	Gain in 1882.	Loss in 1882.
New York canals, tons	5.179,192	5,467,423	228,231	....
New York Central railroad, tons	11,591,379	11,330,393	....	260,986
Erie railway, tons	11,086,823	11,895,238	808,415	....
	27,857,394	28,693,054	1,096,646	260,986

The important exhibits of these tables might be rendered doubly so if the railroads would consent, or the Legislature would compel them, to make their returns conform more nearly to those of the canals. The State Engineer gets from the road reports of tonnage return under seven general heads. Under these same general heads the canal reports classify sixty-two different articles, and we know how much in quantity of each class has been carried on the canals, the value at the place of shipment, and the tolls paid to the State thereon.

Comparing 1881 and 1882, and we have a gain on the canals in the latter year as compared with the former, of 288,231 tons; on the New York Central railroad a loss of 260,986 tons, and on the Erie railway a gain of 808,415 ton — a net gain in tonnage for 1882, of 835.660 tons. Total increase on all lines since 1858, 23,445,501 tons, or over 446 per cent.

The following table shows the tons of each class of freight, and the aggregate tonnage of all classes, transported on the New York Central railroad for each year, commencing with 1856.

YEAR.	Products of the forest.	Products of animals.	Vegetable food.	All other agricultural products.	Manufactures.	Merchandise.	Other articles.	Aggregate tonnage.
1856	29,547	161,807	283,027	20,068	72,732	127,231	81,700	776,112
1857	31,468	180,852	275,941	18,989	75,731	177,708	78,102	838,791
1858	24,368	172,076	301,507	18,373	47,939	134,482	66,662	765,407
1859	35,154	204,167	249,751	30,096	57,036	178,782	79,333	834,319
1860	42,305	223,362	343,872	39,169	77,256	201,587	100,632	1,028,183
1861	39,310	251,964	441,562	47,341	80,597	192,583	113,945	1,167,302
1862	39,479	359,020	469,885	45,245	92,123	243,105	138,576	1,387,433
1863	52,829	395,876	405,380	72,467	88,965	310,275	123,812	1,449,604
1864	87,584	383,000	461,511	57,150	112,267	287,804	167,832	1,557,148
1865	55,718	348,661	349,103	32,099	71,481	258,043	160,191	1,275,299
1866	77,443	366,516	453,663	31,620	94,426	342,767	235,762	1,602,197
1867	97,035	358,143	495,194	43,544	111,291	323,359	239,360	1,667,926
1868	100,667	358,592	568,680	40,915	135,211	252,351	390,783	1,846,599
1869	122,436	405,617	764,831	48,523	161,639	291,787	487,052	2,281,885
1870	224,169	622,744	1,297,481	86,178	381,052	623,643	886,733	4,122,000
1871	274,685	708,904	1,459,919	117,627	389,603	626,245	955,073	4,532,056
1872	317,727	785,879	1,153,894	249,062	489,720	474,272	918,411	4,393,965
1873	425,115	962,767	1,452,962	172,506	493,935	565,495	1,449,944	5,522,724
1874	458,527	973,653	1,678,476	219,815	626,632	538,080	1,619,495	6,114,678
1875	383,708	832,935	1,669,070	242,750	673,274	560,176	1,640,041	6,001,954
1876	408,564	827,278	3,100,339	317,710	767,190	546,047	1,836,552	6,803,680
1877	414,869	855,439	1,787,112	386,146	750,389	575,801	1,581,600	6,351,356
1878	415,565	1,024,071	2,628,190	597,388	812,882	542,566	1,674,751	7,695,413
1879	429,261	1,041,296	3,067,813	508,669	1,078,405	656,774	2,233,535	9,015,753
1880	570,410	584,197	3,261,402	491,526	1,556,367	671,630	3,397,506	10,533,038
1881	679,643	853,050	3,183,219	564,471	1,472,581	1,800,630	3,037,685	11,591,379
1882	809,526	777,589	2,557,959	545,093	1,621,532	1,882,868	3,135,826	11,330,393

The following table shows the tons of each class of freight, and the aggregate tonnage of all classes, transported on the Erie railway for each year, commencing with 1856.

YEAR.	Products of the forest.	Products of animals.	Vegetable food.	Other agricultural products.	Manufactures.	Merchandise.	Other articles.	Aggregate tonnage.
1856	116,378	170,099	148,943	13,556	110,769	155,473	218,003	993,221
1857	126,093	145,957	120,617	13,909	143,338	143,716	284,436	978,066
1858	92,550	178,076	154,534	10,885	88,976	128,709	163,235	816,965
1859	97,754	170,322	112,727	15,107	94,266	179,050	199,846	869,072
1860	118,890	201,823	197,233	19,909	113,948	198,610	289,141	1,139,554
1861	108,685	209,757	243,959	26,920	145,672	167,245	351,181	1,253,419
1862	99,677	299,715	261,824	44,067	236,909	220,499	470,264	1,632,955
1863	102,008	338,551	228,632	65,171	270,952	296,998	512,784	1,815,096
1864	104,069	280,723	215,986	260,902	116,681	362,767	829,670	2,170,798
1865	99,865	249,220	212,677	75,344	226,293	327,328	1,043,718	2,234,350
1866	173,410	314,468	397,963	72,554	458,026	356,306	1,470,065	3,242,792
1867	197,715	295,671	277,432	62,694	409,446	301,909	1,939,679	3,484,546
1868	216,123	280,116	302,451	50,405	402,576	398,761	2,257,811	3,908,243
1869	191,629	273,548	322,978	15,752	436,846	459,784	2,611,672	4,312,209
1870	198,620	271,245	468,976	111,155	348,423	440,353	3,013,733	4,852,505
1871	261,272	319,785	745,670	118,961	508,654	478,229	2,411,637	4,844,208
1872	279,725	304,599	711,720	79,498	595,677	451,513	3,141,512	5,564,274
1873	227,112	325,168	584,030	93,579	444,801	600,980	4,037,032	6,312,702
1874	184,464	295,582	791,265	101,961	227,377	597,572	4,166,055	6,364,276
1875	179,514	288,880	674,174	113,195	322,860	553,253	4,108,070	6,239,946
1876	195,865	341,520	775,464	138,737	302,143	609,955	3,609,134	5,972,818
1877	220,387	385,779	706,571	127,285	369,321	665,014	3,708,094	6,182,451
1878	200,231	433,674	1,067,574	144,727	309,180	614,410	3,380,772	6,150,568
1879	248,153	460,221	1,285,804	165,733	365,981	598,717	5,088,032	8,212,641
1880	386,551	509,948	1,470,983	224,013	440,197	714,512	4,969,688	8,715,892
1881	505,983	538,595	1,800,403	366,358	585,145	528,549	6,761,790	11,086,823
1882	650,278	498,513	1,327,598	415,120	868,199	654,368	7,481,162	11 895,238

This table shows the canal tolls and railway freights paid on the tonnage in the preceding table. The aggregate receipts of tolls and railway freights in 1882 exceed those of 1853, the lowest year in the series, by $25,827,946; a gain of 648 per cent on the railway receipts, and a loss on the toll receipts of nearly 80 per cent.

CANALS AND RAILROADS.	1853.	1854.	Gain in 1854.	Loss in 1854.
New York canals, tolls	$3,204,718	$2,773,566	....	$431,152
New York Central railroad, freight	1,838,830	2,479,820	$640,900	....
New York and Erie railroad, freight	2,537,214	3,369,590	832,376	....
	$7,580,762	$8,622,976	$1,473,366	$431,152
	1854.	1855.	Gain in 1855.	Loss in 1855.
New York canals, tolls	$2,773,556	$2,805,077	$31,511	....
New York Central railroad, freight	2,479,820	3,189,603	709,783	....
New York and Erie railroad, freight	3,369,590	3,654,002	283,412	....
	$8,622,976	$9,647,682	$1,024,706	....
	1855.	1856.	Gain in 1856.	Loss in 1856.
New York canals, tolls	$2,805,077	$2,748,212	....	$56,865
New York Central railroad, freight	3,189,603	4,328,041	$1,138,438	....
New York and Erie railroad, freight	3,653,002	4,545,782	892,780	....
	$9,647,682	$11,622,035	$2,031,218	$56,865
	1856.	1857.	Gain in 1857.	Loss in 1857.
New York canals, tolls	$2,748,212	$2,045,641	....	$702,571
New York Central railroad, freight	4,328,041	4,559,276	$231,235	....
New York and Erie railroad, freight	4,545,782	4,097,610	....	448,172
	$11,622,035	$10,702,527	$231,235	$1,150,743
	1857.	1858.	Gain in 1858.	Loss in 1858.
New York canals, tolls	$2,405,641	$2,110,754	$65,313	....
New York Central railroad, freight	5,559,276	3,700,270	....	$859.006
New York and Erie railroad, freight	4,097,610	3,843,310	....	254,300
	$10,702,527	$9,654,334	$65,313	$1,113 306
	1858.	1859.	Gain in 1859.	Loss in 1859.
New York canals, tolls	$2,110,754	$1,723,945	....	$386,809
New York Central railroad, freight	3,700,270	3.337,148	....	343,022
New York and Erie railroad, freight	3,843,310	3,195,869	....	647,441
	$9,654,334	$8,256,962	....	$1,397,272
	1859.	1860.	Gain in 1860.	Loss in 1860.
New York canals, tolls	$1,723,945	$3,009,597	$1,285,652	....
New York Central railroad, freight	3,337,148	4,095,939	758,791	....
New York and Erie railroad, freight	3,195,869	3,884,343	688,474	....
	$8,256,962	$10,989,879	$2,732,917	....
	1860.	1861.	Gain in 1861.	Loss in 1861.
New York canals, tolls	$3,009,597	$3,908,785	$899,188	....
New York Central railroad, freight	4,095,939	4,664,449	568,510	....
New York and Erie railroad, freight	3,884,343	4,351,464	467,121	....
	$10,989,879	$12,924,698	$1,934,819	....
	1861.	1862.	Gain in 1862.	Loss in 1862.
New York canals, tolls	$3,908,785	$5,188,943	$1,279,158	....
New York Central railroad, freight	4,664,449	6,607,331	1,942,882	....
New York and Erie railroad, freight	4,351,464	6,642,915	2,291,451	....
	$12,924,898	$18,439,189	$5,513,491	....
	1862.	1863.	Gain in 1863.	Loss in 1863.
New York canals, tolls	$5,188,943	$4,645.207	....	$543,736
New York Central railroad, freight	6,607,331	7,498 509	$891,278	....
New York and Erie railroad, freight	6,642,915	8,432 234	1,789,319	....
	$18,439,189	$20,575,950	$2,680,597	$543,736

CANALS AND RAILROADS.	1863.	1864,	Gain in 1864.	Loss in 1864.
New York canals, tolls	$4,645,207	$3,983,982	....	$661,225
New York Central railroad, freight	7,498,509	8,543,370	$1,044,861	....
Erie railway, freight	8,432,234	9,855,087	1,422,853	....
	$20,575,950	$22,382,439	$2,467,714	$661,225
	1864.	1865.	Gain in 1865.	Loss in 1865.
New York canals, tolls	$3,983,982	$3,839,955	....	$144,027
New York Central railroad, freight	8,543,370	8,776,028	$232,658	....
Erie railway, freight	9,855,087	10,726,264	871,177	....
	$22,382,439	$23,342,247	$1,103,835	$144,027
	1865.	1866.	Gain in 1866.	Loss in 1866.
New York canals, tolls	$3,839,955	$4,436,639	$596,684	....
New York Central railroad, freight	8,776,028	9,671,920	895,892	....
Erie railway, freight	10,726,264	11,611.023	884,759	....
	$23,342,247	$25,719,582	$2,377,335	....
	1866.	1867.	Gain in 1867.	Loss in 1867.
New York canals, tolls	$4,436,639	$4,088,058	....	$348,581
New York Central railroad, freight	9,671,920	9,151,750	....	520,170
Erie railway, freight	11,611,023	11,204,689	....	406,334
	$25,719,582	$24,444,497	....	$1,275,085
	1867.	1868.	Gain in 1868.	Loss in 1868.
New York canals, tolls	$4,088,058	$4,246,563	$158,505	....
New York Central railroad, freight	9,151,750	9,491,427	339,677	....
Erie railway, freight	11,204,689	11,425,739	221,050	....
	$22,444,479	$25,163,729	$719,232	....
	1868,	1869.	Gain in 1869.	Loss in 1869.
New York canals, tolls	$4,246,563	$3,778,501	....	$468,062
New York Central railroad, freight	9,491,427	10,457,582	$966,155	....
Erie railway, freight	11,425,739	13,046,804	1,621,065	....
	$25,163,729	$27,282,887	$2,587,220	$468,062
	1869.	1870.	Gain in 1870.	Loss in 1870.
New York canals, tolls	$3,778,501	$2,611,578	....	$1,166,923
New York Central railroad, freight.	10,457,582	14,327,418	$3,869,836	....
Erie railway, freight	13,046,804	12,328,027	....	718,777
	$27,282,887	$29,267,023	$3,869,836	$1,885,700
	1870.	1871.	Gain in 1871.	Loss in 1871.
New York canals, tolls	$2,611,578	$3,100,839	$489,261	....
New York Central railroad, freight	14,327,418	14,647,580	320,162	....
Erie railway, freight	12,328,027	13,232,235	904,208	....
	$29,267,023	$30,980,654	$1,713,631	....
	1871.	1872.	Gain in 1872.	Loss in 1872.
New York canals, tolls	$3,100,839	$3,072,411	....	$28,427
New York Central railroad, freight	14.647,580	16,259,647	$1,612,067	....
Erie railway, freight	13,232,235	14,509,745	1,277,516	....
	$30,980,654	$33,841,803	$2,889,577	$28,427
	1872.	1873.	Gain in 1873.	Loss in 1873.
New York canals, tolls	$3,072,411	$2,976,718	....	$95,693
New York Central railroad, freight	16,259,647	19,616,018	$3,356,371	....
Erie railway, freight	14,509,745	15,015,808	506,063	....
	$33,841,803	$37,608,544	$3,862,434	$95,693
	1873.	1874.	Gain in 1874.	Loss in 1874.
New York canals, tolls	$2,976,718	$2,637,071	....	$339,747
New York Central railroad, freight	19,616,018	20,348,725	$732,707	....
Erie railway, freight	15,015,808	13,740,042	....	1,275,766
	$37,608,544	$36,725,838	$732,707	$1,615.513

CANALS AND RAILROADS.	1874.	1875.	Gain in 1875.	Loss in 1875.
New York canals. tolls	$2,637,071	$1,950,032	....	$687,039
New York Central railroad, freight	20,348,725	17,899,702	....	2,449,023
Erie railway, freight	13,740,042	12,287,400	....	1,452,642
	$36,725,838	$32,137,134	....	$4,588,704
	1875.	1876.	Gain in 1876.	Loss in 1876.
New York canals, tolls	$1,590,032	$1,340,004	....	$250,028
New York Central railroad, freight	17,899,702	17,593,265	....	306,437
Erie railway, freight	12,287,400	11,429,930	....	857,470
	$32,137,134	$30,363,199	....	$1,413,935
	1876.	1877.	Gain in 1877.	Loss in 1877.
New York canals, tolls	$1,340,004	$880,896	....	$1,579,108
New York Central railroad, freight	17,593,265	16,424,316	....	1,168,949
Erie railway, freight	11,429,930	10,647,807	....	782,123
	$30,363,199	$27,953,019	....	$2,410,180
	1877.	1878.	Gain in 1878.	Loss in 1878.
New York canals, tolls	$880,896	$993,348	$112,452	....
New York Central railroad, freight	16,424,316	19,045,830	2,621,514	....
Erie railway, freight	10,647,807	11,914,489	1,266,682	....
	$27,953,019	$31,953,667	$4,000,648	....
	1878.	1879.	Gain in 1879.	Loss in 1879.
New York canals, tolls	$993,348	$941,574	....	$51,774
New York Central railroad, freight	19,045,830	18,270,250	....	775,580
Erie railway, freight	11,914,489	12,233,481	$318,992	....
	$31,953,667	$31,445,305	$318,992	$827,354
	1879.	1880.	Gain in 1880.	Loss in 1880.
New York canals, tolls	$941,574	$1,155,419	$213,845	....
New York Central railroad, freight	18,270,250	22,199,966	3,929,716	....
Erie railway, freight	12,233,481	14,391,115	2,157,634	....
	$31,445,305	$37,746,500	$6,301,195	....
	1880.	1881.	Gain in 1881.	Loss in 1881.
New York canals, tolls	$1,155,419	$632,390	....	$523,029
New York Central railroad, freight	22,199,966	20,736,750	....	1,463,216
Erie railway, freight	14,391,115	15,979,577	$1,588,462	....
	$37,746,500	$37,348,717	$1,588,462	$1,986,245
	1881.	1882.	Gain in 1882.	Loss in 1882.
New York canals, tolls	$632,390	$655,826	$23,436	....
New York Central railroad, freight	20,736,750	17,672,252	....	$3,064,498
Erie railway, freight	15,979,577	15,080,630	....	898,947
	$37,348,717	$33,408,708	$23,436	$3,963,445

SERIES OF TABLES.

The following series of tables have been prepared to show the tendency of trade on the canals. The remarks preceding each statement explain their object and contents fully.

The total tonnage of all the property on the canals, ascending and descending, its value and the amount of tolls collected for the forty-six years preceding, is as follows:

YEAR.	Tons.	Value.	Tolls.
1837	1,171,296	$55,809,288	$1,292,623
1838	1,333,011	65,746,559	1,590,911
1839	1,435,713	73,399,764	1,616,382
1840	1,416,046	66,303,892	1,775,747
1841	1,521,661	92,202,929	2,034,882
1842	1,236,931	60,016,608	1,749,196
1843	1,513,439	76,276,909	2,081,590
1844	1,816,586	90,921,152	2,446,374
1845	1,977,565	100,629,859	2,646,181
1846	2,268,662	115,612,109	2,756,106
1847	2,869,810	151,563,428	3,635,381
1848	2,796,230	140,086,157	3,252,212
1849	2,894,732	144,732,285	3,268,226
1850	3,076,617	156,397,929	3,273,896
1851	2,582,733	159,981,801	3,329,727
1852	3,863,441	196,603,517	3,118,234
1853	4,247,853	207,179,570	3,204,718
1854	4,165,862	210,284,312	2,773,566
1855	4,022,617	204,390,147	2,805,077
1856	4,116,082	218,327,062	2,748,212
1857	3,344,061	136,997,018	2,045,641
1858	3,665,192	138,568,844	2,110,754
1859	3,781,684	132,160,758	1,723,945
1860	4,650,214	170,849,198	3,009,597
1861	4,507,635	130,115,893	3,908,785
1862	5,598,785	203,234,331	5,188,943
1863	5,557,692	240,046,461	4,645,207
1864	4,852,941	274,400,639	3,983,982
1865	4,729,654	256,237,104	3,839,955
1866	5,775,220	270,963,676	4,436,639
1867	5,688,325	278,956,712	4,088,058
1868	6,442,225	305,301,929	4,246,563
1869	5,859,080	249,281,284	3,778,501
1870	6,173,769	231,836,176	2,611,578
1871	6,467,888	238,767,691	3,100,838
1872	6,673,370	220,913,321	3,072,411
1873	6,364,782	191,715,500	2,976,718
1874	5,804,588	196,674,322	2,637,071
1875	4,859,958	145,008,575	1,590,032
1876	4,172,129	113,090,379	1,340,004
1877	4,955,963	128,923,890	880,896
1878	5,171,320	182,254,528	993,348
1879	5,362,372	285,280,726	941,574
1880	6,457,656	247,844,790	1,155,419
1881	5,179,192	162,153,565	632,390
1882	5,467,423	147,918,907	655,826

The total tons coming to tide water from Erie and Champlain canals for each of the forty-six years, and the aggregate value thereof in market, is as follows:

YEAR.	Tons.	Value.
1837	611,781	$21,822,354
1838	640,481	23,038,510
1839	602,128	20,163,199
1840	669,012	23,213,573
1841	774,334	27,225,322
1842	666,626	22,751,013
1843	836,861	28,453,408
1844	1,019,094	34,183,167
1845	1,204,943	45,452,321
1846	1,362,319	51,105,256
1847	1,744,283	73,092,414
1848	1,447,905	50,883,907
1849	1,579,946	52,375,521
1850	2,038,863	55,474,637
1851	1,977,151	53,927,508
1852	2,234,822	66,893,102
1853	2,505,797	73,688,044
1854	2,223,743	72,120,681
1855	1,890,593	74,177,937
1856	2,123,469	74,286,735
1857	1,617,187	51,190,018
1858	1,985,142	61,536,061
1859	2,121,672	43,175,312
1860	2,854,877	78,798,617
1861	2,980,144	81,432,759
1862	3,402,709	111,176,568
1863	3,274,727	123,173,294
1864	2,805,257	145,609,202
1865	2,730,181	113,865,846
1866	3,305,607	131,801,477
1867	3,029,695	120,902,834
1868	3,240,806	136,446,582
1869	3, 096, 142	114, 866, 060
1870	3, 156, 302	105, 517, 020
1871	3, 494, 801	106, 874, 570
1872	3, 647, 944	107, 086, 362
1873	3, 376, 649	97, 869, 497
1874	3, 123, 112	107, 976, 476
1875	2, 608, 777	89, 447, 518
1876	2, 426, 182	73, 893, 878
1877	2, 986, 812	76, 787, 713
1878	3, 637, 101	78, 563, 710
1879	3, 286, 176	96, 992, 498
1880	4, 067, 402	143, 572, 991
1881	3, 065, 839	68, 785, 451
1882	3, 068, 152	74, 303, 139

The whole quantity of wheat and flour which came to the Hudson river from 1837 to 1882, inclusive, with the aggregate market value of the same, and the amount of tolls received on all the wheat and flour transported on the canals in each year from 1837 to 1882, inclusive, is as follows:

YEAR.	Tons.	Value.	Tolls.
1837	116,491	$9,640,156	$301,739
1838	133,080	9,883,586	380,161
1839	124,683	7,217,841	404,525
1840	244,862	10,862,812	700,071
1841	201,360	10,165,355	621,046
1842	198,231	9,284,778	606,727
1843	248,780	10,283,454	731,816
1844	277,865	11,211,677	816,711
1845	320,463	15,962,950	851,533
1846	419,366	18,836,412	1,099,325
1847	551,205	32,890,938	1,460,424
1848	431,641	21,148,421	1,126,133
1849	434,444	19,308,595	1,128,064
1850	461,781	20,218,188	1,114,519
1851	457,624	16,487,652	867,881
1852	576,772	22,564,256	995,160
1853	618,858	30,034,571	998,962
1854	240,655	18,482,377	363,763
1855	301,125	23,163,681	548,946
1856	474,385	29,098,973	709,640
1857	263,141	14,043,581	456,350
1858	454,831	19,632,087	529,254
1859	250,872	9,970,409	298,100
1860	710,138	29,027,837	841,444
1861	1,054,295	42,200,199	1,566,880
1862	1,177,299	50,160,517	2,178,345
1863	846,446	41,463,393	1,557,862
1864	606,891	48,386,617	1,175,646
1865	420,643	27,917,580	789,073
1866	289,166	22,867,943	526,351
1867	332,589	24,579,421	707,349
1868	390,852	29,871,363	721,954
1869	636, 670	31, 923, 209	1, 121, 895
1870	575, 684	26, 781, 591	527, 803
1871	678, 450	34, 682, 940	578, 997
1872	356, 917	19, 858, 326	240, 274
1873	682, 827	36, 481, 266	744, 762
1874	726, 702	30, 454, 750	707, 119
1875	686, 709	28, 649, 579	472, 922
1876	357, 683	17, 763, 864	250, 866
1877	385, 072	19, 327, 956	133, 847
1878	811, 908	29, 127, 026	270, 694
1879	914, 619	42, 700, 659	309, 934
1880	883, 247	33, 915, 057	314, 220
1881	418, 621	18, 221, 126	133, 059
1882	583, 612	22, 378, 418	203, 129

TABLE showing the tons of wheat and flour shipped at Buffalo and Oswego, from the year 1837 *to* 1882 ; *at Black Rock from* 1839 *to* 1856, *inclusive, and at Tonawanda from* 1850 *to* 1882 ; *and the total tons of wheat and flour which arrived at the Hudson river, as follows:*

YEAR.	Buffalo, tons.	Black Rock, tons.	Tonawanda, tons.	Oswego, tons.	Total.	Total tons arrived at tide-water.
1837	27, 206	....	....	7, 429	34, 635	116, 491
1838	57, 977	....	....	10, 010	67, 987	133, 080
1839	60, 082	7, 697	....	15, 108	82, 887	124, 683
1840	95, 573	12, 825	....	15, 075	123, 473	214, 862
1841	106, 271	24, 843	....	16, 677	147, 791	201, 360
1842	107, 522	13, 035	....	14, 338	134, 895	198, 231
1843	146, 126	12, 882	....	25, 853	184, 866	248, 780
1844	145, 510	15, 609	....	42, 292	203, 472	277, 893
1845	118, 614	17, 066	....	44, 560	180, 240	320, 463
1846	247, 860	15, 564	....	63, 905	328, 329	419, 366
1847	380, 053	18, 489	....	87, 329	485, 871	551, 205
1848	253, 325	19, 376	....	90, 411	363, 112	431, 641
1849	229, 983	22, 196	....	119, 201	371, 380	434, 444
1850	205, 457	24, 256	13, 815	133, 473	377, 001	461, 781
1851	229, 526	35, 457	23, 316	146, 204	424, 503	457, 624
1852	246, 632	33, 336	31, 868	182, 434	494, 000	576, 772
1853	219, 868	33, 704	34, 697	227, 631	515, 900	613, 858
1854	115, 468	13, 310	5, 147	72, 975	206, 900	240, 655
1855	219, 111	11, 914	3, 255	124, 004	358, 284	302, 125
1856	233, 200	4, 071	502	222, 542	460, 315	475, 385
1857	209, 727	....	4, 097	104, 322	318, 146	263, 141
1858	332, 174	....	8, 051	172, 674	512, 899	454, 831

Table showing the tons of wheat and flour shipped at Buffalo and Oswego, etc. — (Continued.)

YEAR.	Buffalo, tons.	Black Rock, tons.	Tonawanda, tons.	Oswego, tons.	Total.	Total tons arrived at tide-water.
1859	208, 854	....	8, 970	93, 345	311, 169	250, 872
1860	438, 076	....	29, 915	249, 069	717, 060	710, 138
1861	744, 484	....	10, 571	277, 679	1, 032, 734	1, 054, 295
1862	881, 350	....	2, 174	276, 237	1, 159, 761	1, 777, 299
1863	632, 867	....	6, 180	222, 304	861, 351	846, 446
1864	497, 848	....	17, 485	122, 366	637, 699	106, 883
1865	321, 403	....	1, 472	110, 364	433, 239	413, 831
1866	238, 818	....	17	82, 643	321, 478	280, 166
1867	304, 962	....	349	83, 414	388, 725	332, 588
1868	311, 695	....	2, 150	105, 795	419, 640	390, 852
1869	496, 512	....	12	148, 721	645, 245	636, 670
1870	510, 416	....	....	127, 172	637, 588	575, 684
1871	576, 004	....	452	133, 216	709, 672	678, 450
1872	330, 591	....	61	62, 640	393, 292	356, 917
1873	738, 544	....	100	57, 283	795, 927	682, 827
1874	650, 161	....	62	108, 289	758, 512	726, 702
1875	701, 174	....	....	34, 418	735, 592	686, 709
1876	377, 548	....	....	22, 867	400, 415	357, 683
1877	398, 568	....	1, 558	29, 810	429, 936	385, 072
1878	775, 325	....	1, 628	25, 565	802, 518	811, 908
1879	891, 773	....	1, 870	26, 474	920, 117	914, 619
1880	898, 458	....	1, 888	18, 417	918, 763	883, 247
1881	387, 073	....	1, 023	26, 110	414, 206	418, 621
1882	586, 014	......	1, 128	21, 087	608, 229	583, 612

TABLE showing the tendency of lockages upon the Erie canal at various points, for a series of years, as follows:

YEAR.	Lock No. 1, Albany.	Port Schuyler side-cut lock.	West Troy side-cut.	Total to and from the Hudson river.	Lock three miles west of Schenectady.	Syracuse lock.	Geddes lock.	1st lock east of Rochester (Brighton lock).	Lockport locks.	Black Rock guard-lock.	Junction lock Champlain canal.
1837 ...	24, 618	......	13, 942	38, 560	21, 055	18, 181	15, 207	......	10, 041	11, 173	......
1838 ...	23, 478	......	16, 418	39, 896	25, 962	20, 383	18, 557	......	......	......	......
1839 ...	......	......	......	......	24, 234	......	......	......	......	......	......
1840 ...	......	......	......	......	26, 987	......	......	......	......	......	......
1841 ...	......	......	......	......	30, 320	......	......	......	......	......	......
1842 ...	......	......	......	......	22, 869	19, 397	16, 069	......	11, 697	11, 097	8, 813
1843 ...	17, 326	3, 258	12, 089	32, 673	23, 184	21, 165	17, 447	12, 658	11, 697	12, 769	8, 164
1844 ...	20, 845	4, 243	13, 749	38, 837	28, 219	25, 198	20, 044	14, 167	12, 994	14, 554	10, 099
1845 ...	18, 963	9, 127	12, 968	41, 058	30, 452	28, 203	23, 052	13, 747	15, 665	14, 296	8, 647
1846 ...	18, 169	11, 495	16, 196	45, 860	33, 431	32, 212	25, 225	14, 699	20, 333	16, 343	9, 771
1847 ...	23, 743	15, 363	15, 124	54, 230	43, 957	39, 149	31, 650	23, 476	26, 327	27, 295	10, 174
1848 ...	19, 519	6, 940	16, 255	42, 714	34, 911	34, 760	29, 066	18, 675	20, 255	19, 470	9, 465
1849 ...	19, 355	9, 888	17, 609	46, 852	36, 918	38, 634	28, 740	20, 617	20, 124	18, 181	10, 397
1850 ...	18, 382	8, 984	24, 056	51, 422	38, 444	41, 170	27, 799	20, 299	21, 111	20, 103	12, 801
1851 ...	19, 907	10, 054	26, 838	56, 799	40, 396	......	29, 535	23, 054	25, 094	20, 515	13, 861
1852 ...	20, 178	8, 086	29, 104	57, 368	41, 572	38, 933	29, 952	22, 434	25, 164	20, 830	13, 478
1853 ...	19, 940	8, 556	25, 430	53, 826	42, 967	35, 550	29, 332	20, 650	20, 839	19, 476	13, 313
1854 ...	16, 258	10, 626	19, 903	46, 787	35, 981	32, 813	29, 088	19, 740	23, 152	18, 632	14, 693
1855 ...	14, 622	6, 115	17, 582	38, 319	30, 873	29, 365	28, 858	16, 563	20, 752	18, 245	13, 528
1856 ...	12, 498	10, 742	22, 804	46, 044	31, 223	28, 547	20, 788	14, 092	18, 538	15, 894	15, 873
1857 ...	7, 494	5, 454	15, 826	28, 374	22, 182	25, 699	16, 337	12, 290	16, 374	12, 503	9, 291
1858 ...	12, 112	5, 824	16, 138	33, 774	23, 474	27, 054	16, 957	13, 288	15, 117	13, 050	8, 912
1859 ...	6, 276	6, 508	15, 095	27, 879	21, 905	22, 547	*	11, 080	11, 700	10, 695	9, 240

TABLE showing the tendency of lockages upon the Erie canal, etc.—(Continued).

YEAR.	Lock No. 1, Albany.	Port Schuyler side-cut lock.	West Troy side-cut.	Total to and from the Hudson river.	Lock three miles west of Schenectady.	Syracuse lock.	Geddes lock.	1st lock east of Rochester (Brighton lock).	Lockport locks.	Black Rock guard-lock.	Junction lock, Champlain canal.
1860...	8,959	9,213	16,437	34,609	32,430	32,862	21,880	18,337	19,585	16,815	9,159
1861...	8,399	9,420	16,755	34,594	31,179	29,510	24,283	20,553	25,261	20,549	6,607
1862...	11,719	9,351	19,175	40,245	34,977	38,409	31,019	24,597	30,906	25,806	7,889
1863...	9,397	8,123	18,497	35,071	30,071	30,532	26,328	20,962	23,801	20,936	10,816
1864...	7,159	6,627	15,207	28,993	28,742	26,163	22,547	18,910	19,662	16,301	11,118
1865...	6,263	7,169	15,974	29,406	26,037	23,332	20,203	16,328	19,589	13,756	12,545
1866...	6,105	5,971	18,150	30,226	29,882	25,193	23,806	18,656	19,764	19,207	10,540
1867...	6,993	6,572	15,073	28,636	28,654	24,849	21,453	18,861	18,930	16,200	9,752
1868...	4,983	6,583	16,541	28,107	32,107	23,918	21,502	17,348	17,755	14,894	9,805
1869...	3,776	6,085	13,819	23,680	24,625	24,834	21,654	14,605	15,740	13,377	8,709
1870...	4,238	6,530	16,062	26,830	21,798	26,285	21,241	15,234	16,623	14,334	10,075
1871...	5,385	6,444	18,135	29,964	29,725	29,592	24,779	19,469	21,062	17,510	9,436
1872...	6,564	7,328	15,396	29,288	28,035	30,845	24,274	19,001	21,956	17,467	11,235
1873...	6,347	6,233	14,626	27,206	24,900	28,234	23,551	19,569	21,662	10,027	9,646
1874...	6,850	6,481	16,337	29,668	24,085	23,235	21,654	15,969	17,527	16,390	7,978
1875...	7,093	3,200	15,926	26,219	18,761	19,241	17,664	14,137	15,059	12,878	8,064
1876...	5,585	2,688	14,831	23,094	16,671	16,152	15,795	12,071	15,353	10,227	9,260
1877...	6,356	3,398	17,385	27,139	21,408	19,767	19,576	13,970	18,198	14,137	9,379
1878...	6,377	4,140	18,273	29,790	26,340	24,580	23,485	19,448	20,814	18,566	9,181
1879...	6,028	4,093	18,348	28,469	25,916	23,787	21,595	19,230	23,286	17,317	9,124
1880...	7,369	4,973	25,244	37,586	29,983	28,424	27,046	23,494	25,170	22,048	11,915
1881...	6,858	4,150	16,105	27,113	20,244	20,733	17,270	15,116	17,124	14,410	10,222
1882...	7,971	2,843	16,582	27,396	21,808	20,182	16,989	14,490	16,609	14,626	11,386

Lockages omitted to be kept in 1859.

TRADE OF THIS STATE AND OF THE WESTERN STATES.

The following table shows for each of the preceding forty-six years how much of the tolls received in each year of navigation was on "products from Western States," how much was on "products of this State," and how much was on "merchandise going from tide water."

YEAR.	TOLLS ON AGRICULTURAL AND OTHER PRODUCTS.		Merchandise from tide water.	Total on canals.
	From other States.	From this State.		
1837	$160,116	$723,756	$408,751	$1,292,623
1838	247,241	803,967	539,703	1,590,911
1839	310,072	756,723	549,587	1,616,382
1840	427,480	865,757	482,510	1,775,747
1841	500,630	924,326	609,926	2,034,882
1842	467,792	827,841	453,563	1,749,196
1843	623,297	892,151	566,142	2,081,590
1844	676,032	1,088,274	682,068	2,446,374
1845	677,922	1,240,678	727,581	2,646,181
1846	1,013,478	1,100,699	641,929	2,756,106
1847	1,583,500	1,213,761	838,120	3,635,381
1848	1,157,905	1,213,060	881,247	3,252,212
1849	1,101,860	1,261,229	905,137	3,268,226
1850	1,137,731	1,222,877	913,288	3,273,896
1851	1,251,390	1,027,124	1,051,213	3,329,727
1852	1,304,018	1,013,990	799,650	3,118,244
1853	1,383,422	945,998	875,328	3,204,718
1854	985,647	1,007,847	780,072	2,773,566
1855	1,148,098	857,359	799,620	2,805,077
1856	1,247,764	743,678	756,770	2,748,212
1857	899,380	674,057	472,204	2,045,641
1858	944,109	888,259	278,386	2,110,754
1859	813,154	682,405	228,386	1,723,945
1860	1,650,978	991,266	367,353	3,009,597
1861	2,682,969	957,697	268,119	3,908,785
1862	3,722,208	1,093,533	373,202	5,188,943
1863	3,279,711	987,374	378,122	4,645,207
1864	2,667,436	907,941	408,605	3,983,982
1865	2,506,974	962,950	370,031	3,839,955
1866	2,893,386	1,055,521	487,732	4,436,639
1867	2,697,752	862,256	528,050	4,088,058
1868	2,668,920	972,422	605,221	4,246,563
1869	2,407,158	944,592	426,751	3,778,501
1870	1,632,362	643,789	335,427	2,611,578
1871	1,982,087	798,844	319,907	3,100,838
1872	1,951,851	755,011	365,549	3,072,411
1873	1,894,506	819,017	263,195	2,976,718
1874	1,765,728	638,143	233,200	2,637,071
1875	1,095,610	331,023	163,399	1,590,032
1876	905,775	201,446	132,783	1,340,004
1877	648,378	128,561	103,957	880,896
1878	784,992	232,134	23,778	993,348
1879	781,114	130,292	30,168	941,574
1880	994,493	169,796	41,130	1,155,419
1881	544,302	88,088	*	632,390
1882	577,3 8	78,488	*	655,826

*No tolls imposed on "west bound" freight.

The statement below gives the total tonnage arriving at tide-water, by way of the Erie canal, for a series of forty-six years, distinguishing between the tonnage from this State and the tonnage from Western States and Canada.

YEAR.	From Western States, tons.	From this State, tons.	Total tons.
1837	56,255	321,252	387,506
1838	83,233	336,016	419,249
1839	121,671	264,596	386,267
1840	158,148	309,167	467,315
1841	224,176	308,344	532,520
1842	221,477	258,672	480,149
1843	256,376	378,969	635,345
1844	308,025	499,416	807,441
1845	304,551	655,039	959,590
1846	506,608	600,662	1,107,270
1847	812,840	618,412	1,431,252
1848	650,154	534,183	1,184,337
1849	768,659	498,068	1,266,724
1850	773,858	780,817	1,554,675
1851	966,993	541,684	1,508,677
1852	1,151,978	502,721	1,654,669
1853	1,213,690	637,748	1,851,438
1854	1,100,526	602,167	1,702,693
1855	1,092,876	327,839	1,420,715
1856	1,212,550	374,580	1,587,130
1857	919,998	197,201	1,117,199
1858	1,273,109	223,578	1,496,687
1859	1,036,634	414,699	1,451,333
1860	1,896,975	379,086	2,276,061
1861	2,158,425	291,184	2,449,609
1862	2,594,837	322,257	2,917,094
1863	2,279,252	368,437	2,647,689
1864	1,907,136	239,498	2,146,634
1865	1,903,642	174,719	2,078,361
1866	2,235,716	287.948	2,523,664
1867	2,129,405	96,707	2,226,112
1868	2,215,222	163,350	2,378,572
1869	2,028,568	229,121	2,257,689
1870	2,048,947	241,751	2,290,698
1871	2,276,393	372,484	2,648,877
1872	2,456,022	214,383	2,670,405
1873	2,527,068	58,287	2,585,355
1874	2,206,604	263,693	2,470,297
1875	1,476,238	438,704	1,914,942
1876	1,402.768	342,552	1,745,320
1877	2.010,081	287,927	2,298,008
1878	2,461,066	370,624	2,831,790
1879	2,363,218	182,784	2,546,002
1880	2,801,282	425,076	3,226,358
1881	1,804,120	389,182	2,193,302
1882	1,824,129	278,311	2,102,440

The following statement corroborates the two preceding ones as to the diminution of the surplus production of our own State. The results in the second column are arrived at by assuming that all the flour and wheat from the Western States arrived at tide-water, and by deducting it from the total arrival at tide-water. In turning wheat into barrels, the practice has been followed of calling five bushels a barrel. It is not strictly accurate, but as it is done for the whole series, it answers for the purpose of a comparison of years. The average price of flour each year at Albany is also given:

YEAR.	Barrels from Western States.	Barrels from this State.	Barrels arriving at tide-water.	Price.
1837	284,902	747,676	1,032,578	$9 50
1838	552,283	637,036	1,189,319	8 50
1839	683,509	425,544	1,109,053	5 50
1840	1,066,615	1,080,084	2,146,699	4 84
1841	1,232,987	596,657	1,829,644	6 00
1842	1,146,292	543,064	1,776,056	5 18
1843	1,586,645	670,532	2,237,177	4 56
1844	1,727,714	746,939	2,474,653	4 50
1845	1,553,740	1,288,416	2,842,156	5 57
1846	2,723,474	929,330	3,652,804	5 05
1847	3,989,232	791,106	4,780,338	6 84
1848	2,983,688	770,114	3,753,802	6 58
1849	2,842,821	886,938	3,739,759	5 00
1850	3,084,959	905,277	3,990,236	5 00
1851	3,495,734	895,467	3,991,201	4 00
1852	3,937,366	877,731	4,815,097	4 58
1853	3,992,289	957,984	4,950,273	5 77
1854	1,586,961	267,252	1,854,213	9 25
1855	2,506,780	....	1,988,226	9 75
1856	3,209,741	276,034	3,485,775	7 60
1857	2,222,092	....	1,988,226	6 53
1858	3,788,069	....	3,563,901	5 50
1859	2,210,620	....	1,925,402	5 70
1860	4,344,387	737,321	5,081,708	5 75
1861	6,712,233	745,022	7,457,255	5 50
1862	7,516,397	843,685	8,360,082	6 00
1863	5,575,233	495,119	6,070,352	6 00
1864	4,005,742	337,122	4,342,864	10 00
1865	2,751,564	329,862	3,081,426	8 13
1866	2,003,703	103,834	2,107,537	10 70
1867	2,226,107	*117,163	2,343,270	10 70
1868	2,812,005	....	2,731,234	11 38
1869	4,210,619	85,778	4,296,397	6 28
1870	4,117,078	....	3,964,834	5 63
1871	4,626,820	268,577	†4,587,997	6 52
1872	2,630,186	....	‡2,420,164	7 50
1873	5,306,835	....	4,580,187	7 25
1874	5,056,335	....	4,924,360	7 00
1875	4,852,369	....	‡4,606,637	7 50
1876	2,661,379	....	2,394,700	7 00
1877	2,867,118	....	2,575,155	7 00
1878	5,329,646	86,758	5,416,404	7 00
1879	5,835,578	262,930	6,098,508	7 00
1880	6,116,728	42,846	§5,893,818	7 00
1881	2,584,691	207,225	2,791,916	7 50
1882	3,890,496	1,803	3,891,299	7 50

---

*This result is partly estimated.

†The quantity of wheat and flour from the Western States which failed to reach tide water in consequence of the sudden closing of the canals, was equivalent to 307,400 barrels.

‡Same remarks as regards 1871, 1872 and 1873.

§The quantity of wheat arrested by the sudden close of navigation Nov. 21, 1880, and which failed to reach tide water, is 1,328,282 bushels (partly estimated), or 265,656 barrels, of five bushels.

The number and tonnage capacity of the boats built and registered in each year since 1843 has been as follows :

YEAR.	Boats.	Tons.	Average of boats.
1844	378	24,360	64 tons.
1845	297	19,781	67 do
1846	477	34,630	73 do
1847	1,466	110,745	76 do
1848	457	33,815	74 do
1849	215	16,370	76 do
1850	152	12,260	80 do
1851	213	18,450	87 do
1852	271	23,945	88 do
1853	590	57,280	97 do
1854	760	80,365	105 do
1855	471	48,220	102 do
1856	364	38,990	107 do
1857	329	37,510	114 do
1858	255	27,830	109 do
1859	206	20,150	98 do
1860	403	48,355	120 do
1861	619	95,230	154 do
1862	850	142,470	168 do
1863	771	119,170	177 do
1864	399	56,235	141 do
1865	200	28,795	144 do
1866	485	74,630	154 do
1867	520	80,360	155 do
1868	387	64,470	167 do
1869	298	46, 650	157 do
1870	269	42, 365	157 do
1871	194	29, 225	151 do
1872	326	57, 925	178 do
1873	433	79, 740	184 do
1874	249	45, 960	183 do
1875	102	17, 435	171 do
1876	75	10, 825	144 do
1877	69	9, 185	133 do
1878	300	48, 365	161 do
1879	382	64, 645	169 do
1880	439	93, 285	212 do
1881	368	69, 065	188 do
1882	93	13, 275	143 do

An interesting exhibit of the average tonnage of the boats, the time necessary to make a passage, and the cost to bring a barrel of flour from Buffalo to Albany, of the lockages at Alexander's lock, and the total tons delivered at tide-water from the Erie canal, is as follows:

YEAR.	Average cargo of boat.	Days' time between Buffalo and Albany.	Toll and freight on a barrel of flour.	Lockage at Alexander's locks.	Tons delivered at tide water from Erie canal.
			Cents.		
1841	41	9	71	30,320	532,520
1844	49	7½	60	28,219	799,816
1847	67	10½	77	43,957	1,431,252
1848	71	9	58	34,911	1,184,337
1849	68	8¾	56	36,918	1,266,724
1850	76	9	58	38,444	1,554,675
1851	78	8½	49	40,396	1,508,677
1852	80	9	53	41,572	1,644,699
1853	84	9	56	42,967	1,851,438
1854	94	8½	52	35,981	1,702,693
1855	92	8½	52	30,873	1,420,715
1856	100	8½	60	31,223	1,587,130
1857	100	8½	46	22,182	1,117,199
1858	126	8½	34	23,474	1,496,687
1859	143	8½	31	20,274	1,451,333
1860	140	8½	42	32,439	2,276,061
1861	157	8½	46	31,179	2,449,609
1862	167	8½	48	34,977	2,917,094
1863	177	9	45	30,071	2,647,689
1864	150	10	57½	28,742	2,146,634
1865	160	10	51	26,037	2,078,361
1866	170	10	52	29,882	2,523,664
1867	156	10	48	28,654	2,226,112
1868	148	10	48	32,107	2,378,572
1869	183	10	51	24, 625	2, 257, 689
1870	181	10	33	25, 124	2, 290, 698
1871	178	11	40	29, 725	2, 648, 877
1872	190	11	42	28, 035	2, 670, 405
1873	213	11	46½	24, 960	2, 585, 355
1874	197	11	31	24, 085	2, 370, 297
1875	204	11	23	18, 761	1, 914, 942
1876	209	11	19	16, 671	1, 745, 320
1877	214	11	21	21, 408	2, 298, 008
1878	215	10	16	26, 340	2, 831, 790
1879	197	..	20	25, 916	2, 546, 002
1880	215	*10½	18	29, 983	3, 226, 358
1881	216	10	12	20, 244	2, 193, 302
1882	193	10	14	21, 808	2, 102, 440

* The boats timed during month of August, averaged 9 days, 9 hours and 12 minutes.

CONCLUSION.

The preceding statements and tables show the business of the State canals for the navigable year which commenced April 11 and closed December 7, 1882.

Among the results shown, as compared with the previous year, are the following:

The total amount of tolls collected was $655,826, being a gain of $23,436.

The total amount of freight transported on the canals was:

	Tons.
West bound	1,312,588
East bound	4,154,835
Total	5,467,423

being a loss on west bound of 16,121, and a gain on east bound of 304,352 tons, or a net gain for the year of 288,231 tons.

The total number of tons which arrived at tide water by the canals was

	Tons.
By Erie canal	2,102,440
By Champlain canal	965,712
Total	3,068,152

which shows a loss of 90,862 tons by the Erie, and a gain of 93,175 tons by the Champlain, or a net gain for the year of 2,313 tons.

The number of boats registered was 93, being 275 less than the previous year.

The combined tonnage of the State canals, and the Central and Erie railways amounted to 28,693.054 tons; being the highest aggregate yet recorded, and a gain of 835.660 tons over the previous year.

The following statement will show the business of the canals, and the two railways, and the aggregate movement for each year, commencing with 1876:

YEAR	Tons moved by canals.	Tons moved by Central railroad.	Tons moved by Erie railway.	Aggregate tons moved.
1876	4,172,129	6,803,680	5,972,818	16,948,627
1877	4,955,963	6,351,356	6,182,451	17,489,770
1878	5,171,320	7,695,413	6,150,568	19,017,301
1879	5,362,372	9,015,753	8,212,641	22,590,766
1880	6,457,656	10,533,038	8,715.892	25.706,586
1881	5,179,192	11,591,379	11,086.823	27.857,394
1882	5,467,423	11,330.393	11.895,238	28,693,054

Respectfully submitted,

IRA DAVENPORT,

Comptroller.

DOCUMENTS

ACCOMPANYING THE COMPTROLLER'S REPORT.

A.

STATEMENT showing the tons (2,000 *pounds*) *of each article of way freight shipped at each office going* WEST *on the several canals, the total tons at each office, and the total tons of each article at all the offices in* 1882.

OFFICES.	Miles boats cleared.	THE FOREST.								AGRICULTURE.	
		Fur and peltry.	PRODUCT OF WOOD.							PRODUCT OF ANIMALS.	
			Boards and scantling.	Shingles.	Timber.	Wood.	Staves.	Ashes, pot and pearl.	Ashes leached.	Pork.	Beef.
ERIE CANAL.											
Albany	159,665	......	......	71	......	......	......	......	......	3	......
West Troy	223,817	......	3,525	9	......	412	463	......	......	......	......
Utica	150,077	......	241	6	......	......	......	......	......	38	......
Syracuse	215,031	......	837	2	40	3,954	489	......	......	......	......
Rochester	89,067	......	182	59	......	1,352	337	......	......	......	......
Tonawanda	41,972	......	1,106	55	3,677	2,996	......	......	......	......	......
Buffalo	......	......	......	......	......	......	......	......	......	......	......
CHAMPLAIN CANAL.											
Waterford	3,180	......	134	......	......	......	75	......	......	......	......
Whitehall	......	......	......	......	......	......	......	......	......	......	......
OSWEGO CANAL.											
Oswego	......	......	......	......	......	......	......	......	......	......	......
CAYUGA AND SENECA CANAL.											
Geneva	8,736	......	......	......	......	......	......	......	......	......	......
BLACK RIVER CANAL.											
Boonville	16,480	......	31	4	......	22	......	......	......	9	......
	908,025	......	6,066	206	3,717	8,736	1,364	......	......	50	......

STATEMENT A — (*Continued*).

OFFICES.	AGRICULTURE – Continued.										
	PRODUCT OF ANIMALS – Continued.						VEGETABLE FOOD.				
	Bacon.	Cheese.	Butter.	Lard, tallow and lard oil.	Wool.	Hides.	Flour.	Wheat.	Rye.	Corn.	Corn meal.
ERIE CANAL.											
Albany	....	....	....	....	....	....	277	....	....	1,100	....
West Troy	....	....	....	....	18	....	190	....	....	592	....
Utica	....	4	....	1	....	....	32	....	....	1,545	33
Syracuse	....	....	....	....	....	....	36	6,552	10	596	8
Rochester	....	....	....	....	....	....	....	269	....	....	....
Tonawanda	....	....	....	....	....	....	288	589	....	....	....
Buffalo	....	....	....	....	....	....	....	....	....	....	....
CHAMPLAIN CANAL.											
Waterford	....	....	....	....	....	....	167	....	25	134	....
Whitehall	....	....	....	....	....	....	....	....	....	....	....
OSWEGO CANAL.											
Oswego	....	....	....	....	....	....	....	....	....	....	....
CAYUGA AND SENECA CANAL.											
Geneva	....	....	....	....	....	....	....	....	....	....	....
BLACK RIVER CANAL											
Boonville	....	....	....	....	....	....	8	....	....	48	40
	....	4	....	1	18	....	998	7,410	35	4,015	81

STATEMENT A — (*Continued*).

OFFICES.	AGRICULTURE — Continued.										
	VEGETABLE FOOD — Continued.								ALL OTHER AGRICULTURAL PRODUCTS.		
	Barley.	Barley malt.	Oats.	Bran and ship stuffs	Peas and beans.	Apples.	Potatoes.	Dried fruit.	Cotton.	Unmanufactured tobacco.	Hemp.
ERIE CANAL.											
Albany	......	......	582	132	......	......	......	......	......	......	......
West Troy	117	......	201	6	331	......	98	......	50	......	20
Utica	......	94	11	315	......	1	2	......	......	......	......
Syracuse	195	......	4	79	......	......	......	1	......	......	......
Rochester	......	770	......	......	......	......	......	......	......	......	......
Tonawanda	121	......	......	......	......	......	5	......	......	......	......
Buffalo	......	......	......	......	......	......	......	......	......	......	......
CHAMPLAIN CANAL.											
Waterford	......	......	22	......	......	......	......	......	......	......	......
Whitehall	......	......	......	......	......	......	......	......	......	......	......
OSWEGO CANAL.											
Oswego	......	......	......	......	......	......	......	......	......	......	......
CAYUGA AND SENECA CANAL.											
Geneva	......	......	......	......	......	......	......	......	......	......	......
BLACK RIVER CANAL.											
Boonville	......	......	......	32	......	25	1	......	......	......	......
	433	864	820	564	331	26	106	1	50	......	20

STATEMENT A — (*Continued*).

OFFICES.	AGRICULTURE — Continued.			MANUFACTURES.							
	ALL OTHER AGRICULTURAL PRODUCTS — Continued.										
	Clover and grass seed.	Flax seed.	Hops.	Domestic spirits.	Oil meal and cake.	Leather.	Furniture.	Bar and pig lead.	Pig iron.	Bloom and bar iron.	Castings and iron ware.
ERIE CANAL.											
Albany	....	....	....	....	....	....	2	....	2,763	....	2
West Troy	....	....	....	....	....	....	5	....	20,007	322	955
Utica	....	....	....	1	2	....	12	....	....	....	79
Syracuse	....	....	....	....	....	....	6	....	224	163	11
Rochester	....	....	....	....	....	....	....	....	579	4	....
Tonawanda	....	....	....	....	....	....	3	....	....	....	....
Buffalo	....	....	....	....	....	....	....	....	....	....	....
CHAMPLAIN CANAL.											
Waterford	....	....	....	....	....	....	....	....	....	....	....
Whitehall	....	....	....	....	....	....	....	....	....	....	....
OSWEGO CANAL.											
Oswego	....	....	....	....	....	....	....	....	....	....	....
CAYUGA AND SENECA CANAL.											
Geneva	....	....	....	....	....	....	....	...	....	....	....
BLACK RIVER CANAL.											
Boonville	....	....	....	....	....	....	....	....	....	....	2
	....	....	....	1	2	....	28	....	23,573	489	1,049

STATEMENT A — (*Continued*).

OFFICES.	MANUFACTURES — Continued.				MERCHANDISE.							
	Domestic woolens.	Domestic cotton.	Domestic salt.	Foreign salt.	Sugar.	Molassas.	Coffee.	Nails, spikes and horse shoes.	Flint enamel crockery and glassware.	Iron and steel.	Railr'd iron.	All other merchandise.
ERIE CANAL.												
Albany	...	...	...	66	10	...	...	...	...	800	540	3,250
West Troy	...	313	52	92	19	...	...	370	119	3,122	10,984	19,760
Utica	...	...	16	...	...	...	...	1	17	1	...	1,270
Syracuse	...	...	26,359	...	...	...	...	...	4	18	1,926	11,828
Rochester	...	...	12,309	...	...	...	...	...	335	170	47	516
Tonawanda	...	...	...	...	...	...	...	...	...	...	...	415
Buffalo	...	...	...	...	...	...	...	...	...	...	...	...
CHAMPLAIN CANAL.												
Waterford	...	547	...	144	...	...	...	...	...	...	...	1,371
Whitehall	...	...	...	...	...	...	...	...	...	...	...	...
OSWEGO CANAL.												
Oswego	...	...	...	...	...	...	...	...	...	...	...	...
CAYUGA AND SENECA CANAL.												
Geneva	...	...	...	...	...	...	...	...	...	...	...	...
BLACK RIVER CANAL.												
Boonville	...	...	320	...	...	...	...	...	...	...	...	180
	...	860	39,056	302	29	...	...	371	475	4,111	13,497	38,590

STATEMENT A — (*Continued*).

OFFICES.	OTHER ARTICLES.										Total at each office.	Total on each canal.
	Live cattle, hogs and sheep.	Stone, lime and clay.	Gypsum	Anthracite coal.	Bituminous coal.	Copper ore.	Iron ore.	Petroleum.	Phosphates.	Sundries.		
ERIE CANAL.												
Albany	....	6,152	....	20,090	181	....	402	....	....	749	37,172	
West Troy	127	36,092	....	118,676	1,689	....	8,961	....	12,542	815	241,053	
Utica	20	2,716	....	6,368	86	....	....	....	....	13,211	26,123	
Syracuse	....	4,666	4,695	4,124	2,545	....	3	....	335	4,258	73,978	
Rochester	....	304	14	51,809	....	....	....	....	130	164	69,350	
Tonawanda	....	90,357	....	....	....	....	....	....	....	3,725	103,837	
Buffalo	....	....	....	....	....	....	....	....	....	....	....	551,513
CHAMPLAIN CANAL.												
Waterford	....	2,776	....	5,852	....	....	1,461	....	....	......	12,708	
Whitehall	....	....	....	....	....	....	......	....	....	......	......	12,708
OSWEGO CANAL.												
Oswego	....	....	....	....	....	....	....	......	....	....	......	
CAYUGA AND SENECA CANAL.												
Geneva	......	....	......	....	....	......	....	......	....	......	....	
BLACK RIVER CANAL.												
Boonville	....	455	....	57	16	....	....	....	....	47	1.297	1,297
	147	144,018	4,709	206,976	4,517	....	10,827	....	13,007	22,969	565,518	565,518

B.

STATEMENT showing the tons (2,000 pounds) of each article of through freight shipped at each office going WEST *on the several canals, the total tons at each office, and the total tons of each article at all the offices in* 1882.

OFFICES.	Miles boats cleared.	THE FOREST.								AGRICULTURE.	
		Fur and peltry.	PRODUCT OF WOOD.							PRODUCT OF ANIMALS.	
			Boards and scantling.	Shingles.	Timber.	Wood.	Staves.	Ashes, pot and pearl.	Ashes leached.	Pork.	Beef.
ERIE CANAL.											
Albany	774,592	......	......	......	......	......	......	......	......	......	......
West Troy	1,629,429	......	1,352	......	......	......	......	......	......	......	......
Utica	......	......	......	......	......	......	......	......	......	......	......
Syracuse	......	......	......	......	......	......	......	......	......	......	......
Rochester	......	......	......	......	......	......	......	......	......	......	......
Tonawanda	......	......	......	......	......	......	......	......	......	......	......
Buffalo	......	......	......	......	......	......	......	......	......	......	......
CHAMPLAIN CANAL.											
Waterford	69,704	......	493	......	......	......	......	......	......	35	7
Whitehall	......	......	......	......	......	......	......	......	......	......	......
OSWEGO CANAL.											
Oswego	......	......	......	......	......	......	......	......	......	......	......
CAYUGA AND SENECA CANAL.											
Geneva	......	......	......	......	......	......	......	......	......	......	......
BLACK RIVER CANAL.											
Boonville	......	......	......	......	......	......	......	......	......	......	......
	2,473,725	......	1,845	......	......	......	......	......	......	35	7

STATEMENT B — (*Continued*).

OFFICES.	AGRICULTURE – Continued.										
	PRODUCT OF ANIMALS — Continued.						VEGETABLE FOOD.				
	Bacon.	Cheese.	Butter.	Lard, tallow and lard oil.	Wool.	Hides.	Flour.	Wheat.	Rye.	Corn.	Corn meal.
ERIE CANAL.											
Albany	....	....	....	....	....	....	5	....	....	....	....
West Troy	....	....	....	75	....	....	118	....	....	13	....
Utica	....	....	....	....	....	....	....	....	....	....	....
Syracuse	....	....	....	....	....	....	....	....	....	....	....
Rochester	....	....	....	....	....	....	....	....	....	....	....
Tonawanda	....	....	....	....	....	....	....	....	....	....	....
Buffalo	....	....	....	....	....	....	....	....	....	....	....
CHAMPLAIN CANAL.											
Waterford	....	....	....	....	....	....	....	....	....	....	....
Whitehall	....	....	....	....	....	....	....	....	....	....	....
OSWEGO CANAL.											
Oswego	....	....	....	....	....	....	....	....	....	....	....
CAYUGA AND SENECA CANAL.											
Geneva	....	....	....	....	....	....	....	....	....	....	....
BLACK RIVER CANAL.											
Boonville	....	....	....	....	....	....	....	....	....	....	....
	....	....	....	75	....	....	123	....	....	13	....

STATEMENT B — (*Continued*).

OFFICES.	AGRICULTURE — Continued.										
	VEGETABLE FOOD — Continued.								ALL OTHER AGRICULTURAL PRODUCTS.		
	Barley.	Barley malt.	Oats.	Bran and ship stuffs.	Peas and beans.	Apples.	Potatoes.	Dried fruit.	Cotton.	Unmanufactured tobacco.	Hemp.
ERIE CANAL.											
Albany	....	....	....	....	....	....	....	....	....	....	125
West Troy	....	....	3	....	35	....	....	1,518	....	10	3,744
Utica	....	....	....	....	....	....	....	....	....	....	....
Syracuse	....	....	....	....	....	....	....	....	....	....	....
Rochester	....	....	....	....	....	....	....	....	....	....	....
Tonawanda	....	....	....	....	....	....	....	....	....	....	....
Buffalo	....	....	....	....	....	....	....	....	....	....	....
CHAMPLAIN CANAL.											
Waterford	....	....	....	....	....	....	....	....	....	....	....
Whitehall	....	....	....	....	....	....	....	....	....	....	....
OSWEGO CANAL.											
Oswego	....	....	....	....	....	....	....	....	....	....	....
CAYUGA AND SENECA CANAL.											
Geneva	....	....	....	....	....	....	....	....	....	....	....
BLACK RIVER CANAL.											
Boonville	....	....	....	....	....	....	....	....	....	....	....
	....	....	3	....	35	....	....	1,518	....	10	3,869

STATEMENT B — (*Continued*).

OFFICES.	AGRICULTURE — Continued.			MANUFACTURES.							
	ALL OTHER AGRICULTURAL PRODUCTS — Continued.										
	Clover and grass seed.	Flax seed.	Hops.	Domestic spirits.	Oil meal and cake.	Leather.	Furniture.	Bar and pig lead.	Pig iron.	Bloom and bar iron.	Castings and iron ware.
ERIE CANAL.											
Albany	....	....	....	....	....	....	....	....	1,660	....	....
West Troy	....	....	....	20	....	....	1	....	14,455	18,726	240
Utica	....	....	....	....	....	....	....	....	....	....	....
Syracuse	....	....	....	....	....	....	....	....	....	....	....
Rochester	....	....	....	....	....	....	....	....	....	....	....
Tonawanda	....	....	....	....	....	....	....	....	....	....	....
Buffalo	....	....	....	....	....	....	....	....	....	....	....
CHAMPLAIN CANAL.											
Waterford	....	....	....	....	....	....	....	....	201	997	....
Whitehall	....	....	....	....	....	....	....	....	....	....	....
OSWEGO CANAL.											
Oswego	....	....	....	....	....	....	....	....	....	....	....
CAYUGA AND SENECA CANAL.											
Geneva	....	....	....	....	....	....	....	....	....	....	....
BLACK RIVER CANAL.											
Boonville	....	....	....	....	....	....	....	....	....	....	....
	....	....	....	20	....	....	1	......	16,316	19,723	240

STATEMENT B — (*Continued*).

OFFICES.	MANUFACTURES — Continued.				MERCHANDISE.							
	Domestic woolens.	Domestic cotton.	Domestic salt.	Foreign salt.	Sugar.	Molasses.	Coffee.	Nails, spikes and horse shoes.	Iron and steel.	Railr'd iron.	Flint enamel crockery and glassware.	All other merchandise.
ERIE CANAL.												
Albany	....	....	....	412	97	....	....	....	8,045	10,187	....	2,939
West Troy	278	277	25	8,852	5,990	3,087	1,743	766	35,527	33,069	228	66,628
Utica	....	....	....	....	....	....	....	....	....	....	....	....
Syracuse	....	....	....	....	....	....	....	....	....	....	....	....
Rochester	....	....	....	....	....	....	....	....	....	....	....	....
Tonawanda	....	....	....	....	....	....	....	....	....	....	....	....
Buffalo	....	....	....	....	....	....	....	....	....	....	....	....
CHAMPLAIN CANAL.												
Waterford	....	....	258	629	483	1,117	....	594	127	247	....	7,923
Whitehall	....	....	....	....	....	....	....	....	....	....	....	....
OSWEGO CANAL.												
Oswego	....	....	....	....	....	....	....	....	....	....	....	....
CAYUGA AND SENECA CANAL.												
Geneva	....	....	....	....	....	....	....	....	....	....	....	....
BLACK RIVER CANAL.												
Boonville	....	....	....	....	....	....	..	....	....	....	....	....
	278	277	283	9,893	6,570	4,204	1,743	1,360	43,699	43,503	228	77,490

STATEMENT B — (*Continued*).

OFFICES.	OTHER ARTICLES.										Total at each office.	Total on each canal.
	Live cattle, hogs and sheep.	Stone, lime and clay.	Gypsum.	Anthracite coal.	Bituminous coal.	Copper ore.	Iron ore.	Petroleum.	Phosphates.	Sundries.		
Erie Canal.												
Albany	....	4,614	....	25,738	....	....	107	....	....	860	54,789	
West Troy	10	64,501	....	317,312	1,039	....	3,085	....	2,229	3,515	588,508	
Utica	....	....	....	....	....	....	....	....	....	....	....	
Syracuse	....	....	....	....	....	....	....	....	....	....	....	
Rochester	....	....	....	....	....	....	....	....	....	....	....	
Tonawanda	....	....	....	....	....	....	....	....	....	....	....	
Buffalo	....	....	....	....	....	....	....	....	....	....	....	643,297
Champlain Canal												
Waterford	....	7,979	142	79,519	2,054	....	922	....	....	46	103,773	
Whitehall	....	....	....	....	....	....	....	....	....	....	....	103,773
Oswego Canal.												
Oswego	....	....	....	....	....	....	....	....	....	....	....	
Cayuga and Seneca Canal.												
Geneva	....	....	....	....	....	....	....	....	....	....	....	
Black River Canal.												
Boonville	....	....	....	....	....	....	....	....	....	....	....	....
	10	77,094	142	422,569	3,093	....	4,114	....	2,229	4,457	747,070	747,070

C.

STATEMENT showing the tons (2,000 pounds) of each article shipped at each office going WEST *on the several canals, the total tons at each office, and the total tons of each article at all the offices in* 1882.

OFFICES.	Miles boats cleared.	THE FOREST.								AGRICULTURE.	
		Fur and peltry.	PRODUCT OF WOOD.							PRODUCT OF ANIMALS.	
			Boards and scantling.	Shingles.	Timber.	Wood.	Staves.	Ashes, pot and pearl.	Ashes leached.	Pork.	Beef.
ERIE CANAL.											
Albany	934,267	......	......	71	......	......	......	......	......	3	......
West Troy	1,853,246	......	4,877	9	......	412	463	......	......	......	......
Utica	150,077	......	241	6	......	......	......	......	......	38	......
Syracuse	215,031	......	847	2	40	3,954	489	......	......	......	......
Rochester	89,067	......	182	59	......	1,352	337	......	......	......	......
Tonawanda	41,972	......	1,106	55	3,677	2,996	......	......	......	......	......
Buffalo	......	......	......	......	......	......	......	......	......	......	......
CHAMPLAIN CANAL.											
Waterford	72,884	......	627	......	......	......	75	......	......	35	7
Whitehall	......	......	......	......	......	......	......	......	......	......	......
OSWEGO CANAL.											
Oswego	......	......	......	......	......	......	......	......	......	......	......
CAYUGA AND SENECA CANAL.											
Geneva	8,726	......	......	......	......	......	......	......	......	......	......
BLACK RIVER CANAL.											
Boonville	16,480	......	31	4	......	22	......	......	......	9	......
	3,381,760	......	7,911	206	3,717	8,736	1,364	......	......	85	7

STATEMENT C — (*Continued*).

OFFICES	AGRICULTURE – Continued.										
	PRODUCT OF ANIMALS – Continued.						VEGETABLE FOOD.				
	Bacon.	Cheese.	Butter.	Lard, tallow and lard oil.	Wool.	Hides.	Flour.	Wheat.	Rye.	Corn.	Corn meal.
ERIE CANAL.											
Albany	......	......	......	......	......	......	282	......	......	1,100	......
West Troy	......	......	......	75	18	......	308	......	......	605	......
Utica	......	4	......	1	......	......	32	......	......	1,545	33
Syracuse	......	......	......	......	......	......	36	6,552	10	596	8
Rochester	......	......	......	......	......	......	......	269	......	......	......
Tonawanda	......	......	......	......	......	......	288	589	......	......	......
Buffalo	......	......	......	......	......	......	......	......	......	......	......
CHAMPLAIN CANAL.											
Waterford	......	......	......	......	......	......	167	......	25	134	......
Whitehall	......	......	......	......	......	......	......	......	......	......	......
OSWEGO CANAL.											
Oswego	......	......	......	......	......	......	......	......	......	......	......
CAYUGA AND SENECA CANAL.											
Geneva	......	......	......	......	......	......	......	......	......	......	......
BLACK RIVER CANAL.											
Boonville	......	......	......	......	......	......	8	......	......	48	40
	......	4	......	76	18	......	1,121	7,410	35	4,028	81

STATEMENT C — (*Continued*).

OFFICES	AGRICULTURE — Continued.										
	Vegetable Food — Continued.								All other Agricultural Products.		
	Barley.	Barley malt.	Oats.	Bran and ship stuffs.	Peas and beans.	Apples.	Potatoes.	Dried fruit.	Cotton.	Unmanufactured tobacco.	Hemp.
Erie Canal.											
Albany			582	132							125
West Troy	117		204	6	366		98	1,518	50	10	3,764
Utica		94	11	315		1	2				
Syracuse	195		4	79				1			
Rochester		770									
Tonawanda	121						5				
Buffalo											
Champlain Canal.											
Waterford			22								
Whitehall											
Oswego Canal.											
Oswego											
Cayuga and Seneca Canal.											
Geneva											
Black River Canal.											
Boonville				32		25	1				
	433	864	823	564	366	26	106	1,519	50	10	3,889

STATEMENT C — (*Continued*).

OFFICES.	AGRICULTURE — Continued.			MANUFACTURES.							
	ALL OTHER AGRICULTURAL PRODUCTS — Continued.										
	Clover and grass seed.	Flax seed.	Hops.	Domestic spirits.	Oil meal and cake.	Leather.	Furniture.	Bar and pig lead.	Pig iron.	Bloom and bar iron.	Castings and iron ware.
ERIE CANAL.											
Albany	....	....	....	....	....	....	2	....	4,423	....	2
West Troy	....	....	....	20	....	....	6	....	34,462	19,048	1,195
Utica	....	....	....	1	2	....	12	....	....	....	79
Syracuse	....	....	....	....	....	....	6	....	224	163	11
Rochester	....	....	....	....	....	....	....	....	579	4	....
Tonawanda	....	....	....	....	....	....	3	....	....	....	....
Buffalo	....	....	....	....	....	....	....	....	....	....	....
CHAMPLAIN CANAL.											
Waterford	....	....	....	....	....	....	....	....	201	997	....
Whitehall	....	....	....	....	....	....	....	....	....	....	....
OSWEGO CANAL.											
Oswego	....	....	....	....	....	....	....	....	....	....	....
CAYUGA AND SENECA CANAL.											
Geneva	....	....	....	....	....	....	....	....	....	....	....
BLACK RIVER CANAL.											
Boonville	....	....	....	....	....	....	....	....	....	....	2
	....	....	....	21	2	....	29	....	39,889	20,212	1,289

STATEMENT C—(*Continued*).

OFFICES.	MANUFACTURES—Continued.				MERCHANDISE.							
	Domestic woolens.	Domestic cotton.	Domestic salt.	Foreign salt.	Sugar.	Molasses.	Coffee.	Nails, spikes and horse shoes.	Iron and steel.	Railr'd iron.	Flint enamel crockery and glassware.	All other merchandise.
ERIE CANAL.												
Albany	......	......	......	478	107	......	......	......	8,845	10,727	......	6,189
West Troy	278	590	77	8,944	6,009	3,087	1,743	1,136	38,649	44,053	347	86,388
Utica	......	......	16	......	......	......	......	1	1	......	17	1,270
Syracuse	......	......	26,359	......	......	......	......	......	18	1,926	4	11,828
Rochester	......	......	12,309	......	......	......	......	......	170	47	335	516
Tonawanda	......	......	......	......	......	......	......	......	......	......	......	415
Buffalo	......	......	......	......	......	......	......	......	......	......	......	......
CHAMPLAIN CANAL.												
Waterford	......	547	258	773	483	1,117	......	594	127	247	......	9,294
Whitehall	......	......	......	......	......	......	......	......	......	......	......	......
OSWEGO CANAL.												
Oswego	......	......	......	......	......	......	......	......	......	......	......	......
CAYUGA AND SENECA CANAL.												
Geneva	......	......	......	......	......	......	......	......	......	......	......	......
BLACK RIVER CANAL.												
Boonville	......	......	320	......	......	......	......	......	......	......	......	180
	278	1,137	39,329	10,195	6,599	4,204	1,743	1,731	47,810	57,000	703	116,080

STATEMENT C — (*Continued*).

OFFICES.	OTHER ARTICLES.										Total at each office.	Total on each canal.
	Live cattle, hogs and sheep.	Stone, lime and clay.	Gypsum	Anthracite coal.	Bituminous coal.	Copper ore.	Iron ore.	Petroleum.	Phosphates.	Sundries.		
ERIE CANAL.												
Albany	....	10,766	......	45,828	181	....	509	......	....	1,609	91,961	
West Troy	137	100,593	....	435,988	2,728	....	12,046	....	14,771	4,366	829,561	
Utica	20	2,716	....	6,368	86	....	....	....	....	13,211	26,123	
Syracuse	....	4,666	4,695	4,124	2,545	......	3	......	335	4,258	73,978	
Rochester	......	304	14	51,809	....	....	....	....	130	164	69,350	
Tonawanda	....	90,857	....	....	....	....	....	....	....	3,725	103,857	
Buffalo	....	....	....	....	....	....	....	....	....	....	.....	
												1,194,810
CHAMPLAIN CANAL.												
Waterford	....	10,755	142	85,371	2,054	....	2,383	....	......	46	116,481	
Whitehall	....	....	....	....	....	....	......	....	....	......	....	
												116,481
OSWEGO CANAL.												
Oswego	....	....	....	....	....	....	....	......	....	....	....	
CAYUGA AND SENECA CANAL.												
Geneva	....	....	......	....	....	......	......	....	....	......	....	
BLACK RIVER CANAL.												
Boonville	....	455	....	57	16	....	....	....	......	47	1,297	1,297
	157	221,112	4,851	629,545	7,610	....	14,941	....	15,236	27,426	1,312,588	1,312,588

D.

STATEMENT showing the tons (2,000 pounds) of each article of way freight shipped at each office going EAST *on the several canals, the total tons at each office, and the total tons of each article at all the offices in 1882.*

OFFICES.	Miles boats cleared.	THE FOREST.								AGRICULTURE.	
		Fur and peltry.	PRODUCT OF WOOD.							PRODUCT OF ANIMALS.	
			Boards and scantling.	Shingles.	Timber.	Wood.	Staves.	Ashes, pot and pearl.	Ashes leached.	Pork.	Beef.
ERIE CANAL.											
Albany	....	....	5,553	....	....	64	....	....	....	....	....
West Troy	16,832	....	2,012	....	2,666	2,582	....	....	....	....	....
Utica	28,921	....	12,517	20	1,236	8,125	....	....	....	8	....
Syracuse	146,497	....	6,595	199	1,297	8,882	3,470	....	....	8	....
Rochester	51,089	....	4,824	47	....	577	103	....	....	....	....
Tonawanda	43,250	....	60,383	2,289	31,227	686	275	....	....	....	....
Buffalo	161,897	....	39,880	2,256	....	....	14,340	....	....	....	....
CHAMPLAIN CANAL.											
Waterford	109,029	....	240,690	....	332	11,687	....	....	273	....	....
Whitehall	3,063	....	1,887	66	887	6,152	....	....	....	....	....
OSWEGO CANAL.											
Oswego	51,149	....	73,460	598	500	6	1,496	....	....	8	....
CAYUGA AND SENECA CANAL.											
Geneva	68,057	....	9,400	....	350	325	....	....	....	....	....
BLACK RIVER CANAL.											
Boonville	142,515	....	76,466	3	11,905	12,006	108	....	....	....	....
	822,299	....	533,667	5,478	50,400	51,092	19,792	....	273	24	....

STATEMENT D — (*Continued*).

OFFICES.	AGRICULTURE – Continued.										
	PRODUCT OF ANIMALS – Continued.						VEGETABLE FOOD.				
	Bacon.	Cheese.	Butter.	Lard, tallow and lard oil.	Wool.	Hides.	Flour.	Wheat.	Rye.	Corn.	Corn meal.
ERIE CANAL.											
Albany	......	......	......	......	......	......	......	1	......	......	......
West Troy	......	......	......	......	......	......	19	20	643	......	......
Utica	......	......	......	......	......	......	......	11	......	625	......
Syracuse	......	......	......	3	......	......	6,498	16,806	54	776	1,487
Rochester	......	......	......	......	......	......	......	10,065	......	449	......
Tonawanda	......	......	......	......	......	......	18	......	......	73	51
Buffalo	......	......	......	......	......	......	798	26,244	192	37,585	257
CHAMPLAIN CANAL.											
Waterford	......	......	......	......	......	......	68	......	35	......	......
Whitehall	......	......	......	......	......	......	......	......	......	......	......
OSWEGO CANAL.											
Oswego	......	......	......	......	......	......	813	12,472	235	4,401	......
CAYUGA AND SENECA CANAL.											
Geneva	......	......	......	......	......	......	......	2,132	382	......	......
BLACK RIVER CANAL.											
Boonville	......	......	......	......	......	......	8	......	......	48	......
	......	......	......	3	......	......	8,214	67,751	1,541	43,909	1,795

STATEMENT D — (*Continued*).

OFFICES.	AGRICULTURE — Continued.										
	VEGETABLE FOOD — Continued.								ALL OTHER AGRICULTURAL PRODUCTS.		
	Barley.	Barley malt.	Oats.	Bran and ship stuffs.	Peas and beans.	Apples.	Potatoes.	Dried fruit.	Cotton.	Unmanufactured tobacco.	Hemp.
ERIE CANAL.											
Albany	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
West Troy	11	396	56	.....	.....	85	426	.....	.....	.....	.....
Utica	272	485	.....	.....	.....	102	1,483	.....	.....	.....	.....
Syracuse	5,453	5,938	1,699	2,112	49	74	2,414	55	.....	.....	.....
Rochester	3,507	239	46	.....	.....	.....	.....	.....	.....	.....	.....
Tonawanda	.....	.....	.....	47	.....	.....	.....	.....	.....	.....	.....
Buffalo	60	186	.....	1,137	.....	.....	.....	.....	.....	.....	.....
CHAMPLAIN CANAL.											
Waterford	158	.....	76	.....	.....	605	11,241	.....	.....	.....	.....
Whitehall	.....	.....	74	.....	.....	.....	.....	.....	.....	.....	.....
OSWEGO CANAL.											
Oswego	6,505	.....	.....	261	.....	.....	.....	.....	.....	.....	.....
CAYUGA AND SENECA CANAL.											
Geneva	2,500	304	.....	.....	.....	.....	.....	.....	.....	.....	.....
BLACK RIVER CANAL.											
Boonville	.....	.....	.....	.....	.....	.....	4,228	.....	.....	.....	.....
	18,470	7,548	1,951	3,557	49	866	19,792	55	.....	.....	.....

STATEMENT D — (*Continued*).

OFFICES.	AGRICULTURE — Continued.			MANUFACTURES.							
	ALL OTHER AGRICULTURAL PRODUCTS — Continued.										
	Clover and grass seed.	Flax seed.	Hops.	Domestic spirits.	Oil meal and cake.	Leather.	Furniture.	Bar and pig lead.	Pig iron.	Bloom and bar iron.	Castings and iron ware.
ERIE CANAL.											
Albany	......	......	......	......	......	......	......	......	......	......	......
West Troy	......	......	......	......	......	......	......	......	......	......	6
Utica	......	......	......	......	......	......	......	......	......	......	13
Syracuse	......	......	......	1	......	......	7	......	560	......	9
Rochester	......	......	......	......	......	......	......	......	......	......	......
Tonawanda	......	......	......	......	......	......	4	......	......	......	......
Buffalo	51	......	......	42	8	......	......	......	465	......	162
CHAMPLAIN CANAL.											
Waterford	......	......	......	......	......	......	......	......	309	......	......
Whitehall	......	......	......	......	......	......	......	......	......	......	......
OSWEGO CANAL.											
Oswego	......	......	......	......	......	......	2	......	......	......	......
CAYUGA AND SENECA CANAL.											
Geneva	......	......	......	......	......	......	......	......	......	......	......
BLACK RIVER CANAL.											
Boonville	......	......	......	......	......	......	8	......	......	......	......
	51	......	......	43	8	......	21	......	1,334	......	190

STATEMENT D — (*Continued*)

OFFICES.	MANUFACTURES — Continued.				MERCHANDISE.							
	Domestic woolens.	Domestic cotton.	Domestic salt.	Foreign salt.	Sugar.	Molasses.	Coffee.	Nails, spikes and horse shoes.	Iron and steel.	Railr'd iron.	Flint enamel crockery and glassware.	All other merchandise.
ERIE CANAL.												
Albany	....	....	....	....	....	....	....	....	....	....	....	....
West Troy	....	....	....	....	....	....	....	....	....	....	25	25,642
Utica	....	11	31	....	....	....	....	....	485	....	106	1,322
Syracuse	....	....	58,267	....	....	....	....	....	2	125	203	13,802
Rochester	....	....	....	....	....	....	....	....	....	....	5	1,627
Tonawanda	....	....	....	....	....	....	....	....	....	....	13	....
Buffalo	....	....	....	....	....	....	....	....	588	....	....	208
CHAMPLAIN CANAL.												
Waterford	....	1,062	....	....	....	....	....	....	....	....	....	818
Whitehall	....	....	....	....	....	....	....	....	....	....	....	....
OSWEGO CANAL.												
Oswego	....	....	208	....	....	....	....	....	....	....	....	165
CAYUGA AND SENECA CANAL.												
Geneva	....	....	....	....	....	....	....	....	....	....	....	....
BLACK RIVER CANAL.												
Boonville	....	....	....	....	....	....	....	....	....	....	....	....
	....	1,073	58,506	....	....	....	....	....	1,075	125	352	43,584

STATEMENT D — (*Continued*).

OFFICES.	OTHER ARTICLES.										Total at each office.	Total on each canal.
	Live cattle, hogs and sheep.	Stone, lime and clay.	Gypsum	Anthracite coal.	Bituminous coal.	Copper ore.	Iron ore.	Petroleum.	Phosphates.	Sundries.		
ERIE CANAL.												
Albany	....	....	....	....	....	....	....	....	....	....	5,622	
West Troy	....	38,982	....	140	210	....	224	....	....	815	74,960	
Utica	....	9,378	....	54,293	....	....	3,565	....	....	2,658	96,746	
Syracuse	20	4,915	....	163,165	46,736	....	....	....	....	4,624	356,305	
Rochester	....	7,951	3	185,822	189	....	....	....	246	42	215,742	
Tonawanda	....	159	....	539	....	....	....	....	....	197	95,961	
Buffalo	....	130	....	....	10,697	....	100	....	224	2,530	158,350	983,686
CHAMPLAIN CANAL.												
Waterford	....	80,725	....	....	....	....	11,076	....	....	25,111	384,108	
Whitehall	....	1,037	....	....	....	....	7,482	210	....	34	17,777	401,885
OSWEGO CANAL.												
Oswego	....	579	....	4,687	2,339	....	....	....	....	1,800	110,535	110,535
CAYUGA AND SENECA CANAL.												
Geneva	....	....	....	22,942	84,934	....	....	....	121	98	123,288	123,488
BLACK RIVER CANAL.												
Boonville	....	140	....	....	....	....	....	....	....	772	105,636	105,636
	20	143,993	3	431,588	145,105	....	22,447	210	591	38,681	1,725,230	1,725,230

E.

STATEMENT showing the tons (2,000 pounds) of each article of through freight shipped at each office going EAST *on the several canals, the total tons at each office, and the total tons of each article at all the offices in* 1882.

OFFICES.	Miles boats cleared.	THE FOREST.								AGRICULTURE.	
		Fur and peltry.	PRODUCT OF WOOD.							PRODUCT OF ANIMALS.	
			Boards and scantling.	Shingles.	Timber.	Wood.	Staves.	Ashes, pot and pearl.	Ashes leached.	Pork.	Beef.
ERIE CANAL.											
Albany	....	....	15,110	9	....	101	....	....	....	....	....
West Troy	....	....	....	....	....	....	....	....	....	....	....
Utica	....	....	....	....	....	....	....	....	....	....	....
Syracuse	....	....	....	....	....	....	....	....	....	....	....
Rochester	....	....	....	....	....	....	....	....	....	....	....
Tonawanda	637,279	....	483,178	792	15,127	....	....	....	....	....	....
Buffalo	1,476,497	....	106,223	470	....	....	27,773	....	1,160	....	....
CHAMPLAIN CANAL.											
Waterford	....	....	....	....	....	....	....	....	....	....	....
Whitehall	250,214	....	201,309	....	2,587	2,307	....	....	390	3	....
OSWEGO CANAL.											
Oswego	248,756	....	223,527	352	....	....	....	....	8,692	....	....
CAYUGA AND SENECA CANAL.											
Geneva	....	....	....	....	....	....	....	....	....	....	....
BLACK RIVER CANAL.											
Boonville	....	....	....	....	....	....	....	....	....	....	....
	2,612,746	....	1,029,347	1,623	17,714	2,408	27,773	....	10,242	3	....

STATEMENT E — (*Continued*).

OFFICES.	AGRICULTURE – Continued.										
	PRODUCT OF ANIMALS – Continued.						VEGETABLE FOOD.				
	Bacon.	Cheese.	Butter.	Lard, tallow and lard oil.	Wool.	Hides.	Flour.	Wheat.	Rye.	Corn.	Corn meal.
ERIE CANAL.											
Albany	....	....	....	....	....	....	....	3	....	2	....
West Troy	....	....	....	....	....	....	....	....	....	....	....
Utica	....	....	....	....	....	....	....	....	....	....	....
Syracuse	....	....	....	....	....	....	....	....	....	....	....
Rochester	....	....	....	....	....	....	....	....	....	....	....
Tonawanda	....	....	....	....	....	....	....	233	....	....	....
Buffalo	....	....	....	1,674	11	....	19	558,953	18,966	203,748	....
CHAMPLAIN CANAL.											
Waterford	....	....	....	....	....	....	....	....	....	....	....
Whitehall	....	....	....	....	....	....	18	63	800	....	....
OSWEGO CANAL.											
Oswego	....	....	....	....	....	....	....	7,802	22,030	....	....
CAYUGA AND SENECA CANAL.											
Geneva	....	....	....	....	....	....	....	....	....	....	....
BLACK RIVER CANAL.											
Boonville	....	....	....	....	....	....	....	....	....	....	....
	....	....	....	1,674	11	....	37	567,054	41,796	203,750	....

STATEMENT E — (*Continued*).

OFFICES.	AGRICULTURE — Continued.										
	Vegetable Food — Continued.								All other Agricultural Products.		
	Barley.	Barley malt.	Oats.	Bran and ship stuffs.	Peas and beans.	Apples.	Potatoes.	Dried fruit.	Cotton.	Unmanufactured tobacco.	Hemp.
Erie Canal.											
Albany	1	......	......	......	......	......	......	......	......	......	......
West Troy	......	......	......	......	......	......	......	......	......	......	......
Utica	......	......	......	......	......	......	......	......	......	......	......
Syracuse	......	......	......	......	......	......	......	......	......	......	......
Rochester	......	......	......	......	......	......	......	......	......	......	......
Tonawanda	......	......	......	......	......	......	......	......	......	......	......
Buffalo	1,677	4,368	9,016	165	......	......	......	......	......	......	6
Champlain Canal.											
Waterford	......	......	......	......	......	......	......	......	......	......	......
Whitehall	11,712	......	9,944	......	21	1,251	2,795	......	......	......	......
Oswego Canal.											
Oswego	64,357	1,616	416	......	5,769	69	58	......	......	......	......
Cayuga and Seneca Canal.											
Geneva	......	......	......	......	......	......	......	......	......	......	......
Black River Canal.											
Boonville	......	......	......	......	......	......	......	......	......	......	......
	77,747	5,984	19,406	165	5,790	1,320	2,853	......	......	......	6

STATEMENT E — (*Continued*).

OFFICES.	AGRICULTURE — Continued.			MANUFACTURES.							
	ALL OTHER AGRICULTURAL PRODUCTS — Continued.										
	Clover and grass seed.	Flax seed.	Hops.	Domestic spirits.	Oil meal and cake.	Leather.	Furniture.	Bar and pig lead.	Pig iron.	Bloom and bar iron.	Castings and iron ware.
ERIE CANAL.											
Albany	....	....	....	....	....	....	....	....	....	....	....
West Troy	....	....	....	....	....	....	....	....	....	....	....
Utica	....	....	....	....	....	....	....	....	....	....	....
Syracuse	....	....	....	....	....	....	....	....	....	....	....
Rochester	....	....	....	....	....	....	....	....	....	....	....
Tonawanda	....	....	....	....	....	....	....	....	....	....	....
Buffalo	176	48,394	....	....	3,134	....	....	....	....	....	107
CHAMPLAIN CANAL.											
Waterford	....	....	....	....	....	....	....	....	....	....	....
Whitehall	....	....	....	....	....	....	1	....	5,759	4,857	111
OSWEGO CANAL.											
Oswego	....	....	....	....	....	....	....	....	....	....	....
CAYUGA AND SENECA CANAL.											
Geneva	....	....	....	....	....	....	....	....	....	....	....
BLACK RIVER CANAL.											
Boonville	....	....	....	....	....	....	....	....	....	....	....
	176	48,394	....	....	3,134	....	1	....	5,759	4,857	218

STATEMENT E — (*Continued*).

OFFICES.	MANUFACTURES — Continued.				MERCHANDISE.							
	Domestic woolens.	Domestic cotton.	Domestic salt.	Foreign salt.	Sugar.	Molasses.	Coffee.	Nails, spikes and horse shoes.	Iron and steel.	Railr'd iron.	Flint enamel crockery and glassware.	All other merchandise.
ERIE CANAL.												
Albany	......	......	......	......	......	......	......	......	......	......	......	......
West Troy	......	......	......	......	......	......	......	......	......	......	......	......
Utica	......	......	......	......	......	......	......	......	......	......	......	......
Syracuse	......	......	......	......	......	......	......	......	......	......	......	......
Rochester	......	......	......	......	......	......	......	......	......	......	......	......
Tonawanda	......	......	......	......	......	......	......	......	......	......	......	......
Buffalo	......	......	......	......	......	......	......	......	......	......	......	155
CHAMPLAIN CANAL.												
Waterford	......	......	......	......	......	......	......	......	......	......	......	......
Whitehall	......	......	......	......	......	......	......	64	153	1,796	......	......
OSWEGO CANAL.												
Oswego	......	......	......	......	......	......	......	......	......	......	......	......
CAYUGA AND SENECA CANAL.												
Geneva	......	......	......	......	......	......	......	......	......	......	......	......
BLACK RIVER CANAL.												
Boonville	......	......	......	......	......	......	......	......	......	......	......	......
	......	......	......	......	......	......	......	64	153	1,796	......	155

STATEMENT E — (*Continued*).

OFFICES.	OTHER ARTICLES.										Total at each office.	Total on each canal.
	Live cattle, hogs and sheep.	Stone, lime and clay.	Gypsum	Anthracite coal.	Bituminous coal.	Copper ore.	Iron ore.	Petroleum.	Phosphates.	Sundries.		
ERIE CANAL.												
Albany	....	....	....	....	8	....	....	....	....	....	15,234	
West Troy	....	....	....	....	....	....	....	....	....	....	....	
Utica	....	....	....	....	....	....	....	....	....	....	....	
Syracuse	....	....	....	....	....	....	....	....	....	....	....	
Rochester	....	....	....	....	....	....	....	....	....	....	....	
Tonawanda	....	....	....	....	....	....	....	....	....	....	499,330	
Buffalo	....	....	....	....	14,579	....	....	....	....	500	1,001,304	1,515,868
CHAMPLAIN CANAL.												
Waterford	....	....	....	....	....	....	....	....	....	....	....	
Whitehall	....	1,732	....	....	....	....	326,973	....	....	4,331	578,977	578,977
OSWEGO CANAL.												
Oswego	....	....	....	....	....	....	....	....	....	72	334,760	334,760
CAYUGA AND SENECA CANAL.												
Geneva	....	....	....	....	....	....	....	....	....	....	....	
BLACK RIVER CANAL.												
Boonville	....	....	....	....	....	....	....	....	....	....	....	
	....	1,732	....	....	14,587	....	326,973	....	....	4,903	2,429,605	2,429,605

F.

STATEMENT showing the tons (2,000 pounds) of each article shipped at each office going EAST *on the several canals, the total tons at each office, and the total tons of each article at all the offices in* 1882.

OFFICES.	Miles boats cleared.	THE FOREST.								AGRICULTURE.	
		Fur and peltry.	PRODUCT OF WOOD.							PRODUCT OF ANIMALS.	
			Boards and scantling.	Shingles.	Timber.	Wood.	Staves.	Ashes, pot and pearl.	Ashes leached.	Pork.	Beef.
ERIE CANAL.											
Albany	....	....	20,663	9	......	165	......	....	....	....	....
West Troy	16,832	....	2,012	....	2,666	2,582	......	....	....	....	....
Utica	28,921	....	12,517	20	1,236	8,125	......	....	....	8	....
Syracuse	146,497	....	6,595	199	1,297	8,882	3,470	....	....	8	....
Rochester	51,089	....	4,824	47	......	577	103	....	....	....	....
Tonawanda	680,529	....	543,561	3,081	46,354	686	275	....	....	....	....
Buffalo	1,638,594	....	146,103	2,726	......	......	42,113	....	1,160	....	....
CHAMPLAIN CANAL.											
Waterford	109,029	....	240,690	....	332	11,687	......	....	273	....	....
Whitehall	253,277	....	203,196	66	3,474	8,459	......	....	390	3	....
OSWEGO CANAL.											
Oswego	299,905	....	296,987	950	500	6	1,496	....	8,692	8	....
CAYUGA AND SENECA CANAL.											
Geneva	68,057	....	9,400	....	350	325	......	....	....	....	....
BLACK RIVER CANAL.											
Boonville	142,515	....	76,466	3	11,905	12,006	108	....	....	....	....
	3,435,045	....	1,563,014	7,101	68,114	53,500	47,565	....	10,515	27	....

STATEMENT F — (*Continued*).

OFFICES.	AGRICULTURE – Continued.										
	PRODUCT OF ANIMALS — Continued.						VEGETABLE FOOD				
	Bacon.	Cheese.	Butter.	Lard, tallow and lard oil.	Wool.	Hides.	Flour.	Wheat.	Rye.	Corn.	Corn meal.
ERIE CANAL.											
Albany	......	......	......	......	......	......	......	4	......	2	......
West Troy	......	......	......	......	......	......	19	20	643	......	......
Utica	......	......	......	......	......	......	......	11	......	625	......
Syracuse	......	......	......	3	......	......	6,498	16,806	54	776	1,487
Rochester	......	......	......	......	......	......	......	10,065	......	449	......
Tonawanda	......	......	......	......	......	......	18	233	......	73	51
Buffalo	......	......	......	1,674	11	......	817	585,197	19,158	241,333	257
CHAMPLAIN CANAL.											
Waterford	......	......	......	......	......	......	68	......	35	......	......
Whitehall	......	......	......	......	......	......	18	63	800	......	......
OSWEGO CANAL.											
Oswego	......	......	......	......	......	......	813	20,274	22,265	4,401	......
CAYUGA AND SENECA CANAL.											
Geneva	......	......	......	......	......	......	......	2,132	382	......	......
BLACK RIVER CANAL.											
Boonville	......	......	......	......	......	......	......	......	......	......	......
	......	......	....	1,677	11	......	8,251	634,805	43,337	247,659	1,795

STATEMENT F — (*Continued*).

OFFICES.	AGRICULTURE — Continued.										
	VEGETABLE FOOD — Continued.								ALL OTHER AGRICULTURAL PRODUCTS.		
	Barley.	Barley malt.	Oats.	Bran and ship stuffs.	Peas and beans.	Apples.	Potatoes.	Dried fruit.	Cotton.	Unmanufactured tobacco.	Hemp.
ERIE CANAL.											
Albany	5	......	......	......	......	......	......	......	......	......	......
West Troy	11	396	56	......	......	85	426	......	......	......	......
Utica	272	485	......	......	......	102	1,483	......	......	......	......
Syracuse	5,453	5,938	1,699	2,112	49	74	2,414	55	......	......	......
Rochester	3,507	239	46	......	......	......	......	......	......	......	......
Tonawanda	......	......	......	47	......	......	......	......	......	......	......
Buffalo	1,737	4,554	9,046	1,302	......	......	......	......	......	......	6
CHAMPLAIN CANAL.											
Waterford	......	......	76	......	......	605	11,241	......	......	......	......
Whitehall	11,870	......	10,018	......	21	1,251	2,795	......	......	......	......
OSWEGO CANAL.											
Oswego	70,862	1,616	416	261	5,769	69	58	......	......	......	......
CAYUGA AND SENECA CANAL.											
Geneva	2,500	304	......	......	......	......	......	......	......	......	......
BLACK RIVER CANAL.											
Boonville	......	......	......	......	......	......	4,228	......	......	......	......
	96,217	13,532	21,357	3,722	5,839	2,186	22,645	55	......	......	6

STATEMENT F — (*Continued*).

OFFICES	AGRICULTURE — Continued.			MANUFACTURES.							
	ALL OTHER AGRICULTURAL PRODUCTS — Continued.										
	Clover and grass seed.	Flax seed.	Hops.	Domestic spirits.	Oil meal and cake.	Leather.	Furniture.	Bar and pig lead.	Pig iron.	Bloom and bar iron.	Castings and iron ware.
ERIE CANAL.											
Albany	....	....	....	....	....	....	....	....	....	....	....
West Troy	....	....	....	....	....	....	....	....	....	....	6
Utica	....	....	....	....	....	....	....	....	....	....	13
Syracuse	....	....	....	1	....	....	7	....	560	....	9
Rochester	....	....	....	....	....	....	....	....	....	....	....
Tonawanda	....	....	....	....	....	....	4	....	....	....	....
Buffalo	227	48,394	....	42	3,142	....	....	....	465	....	269
CHAMPLAIN CANAL.											
Waterford	....	....	....	....	....	....	....	....	309	....	....
Whitehall	....	....	....	....	....	....	1	....	5,759	4,857	111
OSWEGO CANAL.											
Oswego	....	....	....	....	....	....	2	....	....	....	....
CAYUGA AND SENECA CANAL.											
Geneva	....	....	....	....	....	....	....	....	....	....	....
BLACK RIVER CANAL.											
Boonville	....	....	....	....	....	....	8	....	....	....	....
	227	48,394	....	43	3,142	....	22	....	7,093	4,857	408

STATEMENT F — (*Continued*).

OFFICES.	MANUFACTURES — Continued.				MERCHANDISE.							
	Domestic woolens.	Domestic cotton.	Domestic salt.	Foreign salt.	Sugar.	Molasses.	Coffee.	Nails, spikes and horse shoes.	Iron and steel.	Railr'd iron.	Flint enamel crockery and glassware.	All other merchandise.
ERIE CANAL.												
Albany	......	......	......	......	......	......	......	......	......	......	......	......
West Troy	......	......	......	......	......	......	......	......	......	......	25	25,642
Utica	......	11	31	......	......	......	......	......	485	......	106	1,322
Syracuse	......	......	58,267	......	......	......	......	......	2	125	203	13,802
Rochester	......	......	......	......	......	......	......	......	......	......	5	1,627
Tonawanda	......	......	......	......	......	......	......	......	......	......	13	......
Buffalo	......	......	......	......	......	......	......	......	588	......	......	363
CHAMPLAIN CANAL.												
Waterford	......	1,062	......	......	......	......	......	......	......	......	......	818
Whitehall	......	......	......	......	......	......	......	64	153	1,796	......	......
OSWEGO CANAL.												
Oswego	......	......	208	......	......	......	......	......	......	......	......	165
CAYUGA AND SENECA CANAL.												
Geneva	......	......	......	......	......	......	......	......	......	......	......	......
BLACK RIVER CANAL.												
Boonville	......	......	......	......	......	......	..	......	......	......	......	......
	....	1,073	58,506	......	....	......	.....	64	1,228	1,921	352	43,739

STATEMENT F — (*Continued*).

OFFICES.	OTHER ARTICLES.										Total at each office.	Total on each canal.
	Live cattle, hogs and sheep.	Stone, lime and clay.	Gypsum	Anthracite coal.	Bituminous coal.	Copper ore.	Iron ore.	Petroleum.	Phosphates.	Sundries.		
ERIE CANAL.												
Albany	....	....	....	....	8	....	....	....	....	....	20,856	
West Troy	....	38,982	....	140	210	....	224	....	....	815	74,960	
Utica	....	9,378	....	54,293	....	....	3,565	....	....	2,658	96,746	
Syracuse	20	4,915	....	163,165	46,736	....	....	....	....	4,624	356,305	
Rochester	....	7,951	3	185,822	189	....	....	....	246	42	215,742	
Tonawanda	....	159	....	539	....	....	....	....	....	197	595,291	
Buffalo	....	130	....	....	25,276	....	100	210	224	3,030	1,139,654	2,499,554
CHAMPLAIN CANAL.												
Waterford	....	80,725	....	....	....	....	11,076	....	....	25,111	384,108	
Whitehall	....	2,769	....	....	....	....	334,455	....	....	4,365	596,754	980,862
OSWEGO CANAL.												
Oswego	....	579	....	4,687	2,339	....	....	....	....	1,872	445,295	445,295
CAYUGA AND SENECA CANAL.												
Geneva	....	....	....	22,942	84,934	....	....	....	121	98	123,488	123,488
BLACK RIVER CANAL.												
Boonville	....	140	....	....	....	....	....	....	....	772	105,636	105,636
	20	145,728	3	431,588	159,692	...	349,420	210	591	43,584	4,154,835	4,154,835

(No. 1.)

STATEMENT showing the whole amount of tolls collected at each office upon the New York canals during the year 1882, *and the amount refunded and paid into the treasury, being an exhibit of the standing of each collector's account.*

PLACES OF COLLECTION.	Names of Collectors.	RECEIVED.			PAID.		
		Copy fees, fines, sales and lockage fees.	Tolls.	Total at each office.	Tolls refunded.	Paid into the treasury.	Total at each office.
ERIE CANAL.							
Albany	David A. Bulson	$28 92	$4,775 03	$4,803 95	$171 39	$4,632 56	$4,803 95
West Troy	John A. Hulsapple	33 57	3,828 18	3,861 75	71 29	3,790 46	3,861 75
Utica	Prank Sang	26 20	3,262 80	3,289 00	6 18	3,282 82	3,289 00
Syracuse	Edward Drake	50 83	8,085 71	8,136 54	9 13	8,127 41	8,136 54
Rochester	Frank M. Bottum	....	5,070 04	5,070 04	34 93	5,035 11	5,070 04
Tonawanda	Emil Schnitzer	....	169,575 16	169,575 16	1,497 10	168,078 06	169,575 16
Buffalo	Charles M. King	402 80	330,304 21	330,707 01	525 69	330,181 32	330,707 01
Oswego	William S. Turner	....	32,773 83	32,773 83	....	32,773 83	32,773 83
Oswego	Henry Quonce	....	18,718 63	18,718 63	....	18,718 63	18,718 63
Boonville	Leander W. Fiske	....	7,488 11	7,488 11	....	7,488 11	7,488 11
Geneva	Benjamin W. Kings, Jr	....	3,434 74	3,434 74	....	3,434 74	3,434 74
		$542 32	$587,316 44	$587,858 76	$2,315 71	$586,543 05	$587,858 76
CHAMPLAIN CANAL.							
Albany	David A. Bulson	....	$52 30	$52 30	....	$52 30	$52 30
West Troy	John H. Hulsapple	....	70 49	70 49	....	70 49	70 49
Waterford	Thomas Preston	....	13,360 04	13,360 04	$3 52	13,356 52	13,360 04
Whitehall	James Doren	....	24,336 25	24,336 25	19 61	24,316 64	24,336 25
		....	$37,819 08	$37,819 08	$23 13	$37,795 95	$37,819 08
OSWEGO CANAL.							
Albany	David A. Bulson	....	$61 87	$61 87	....	$61 87	$61 87
West Troy	John H. Hulsapple	....	18 40	18 40	....	18 40	18 40
Syracuse	Edward Drake	....	609 29	609 29	....	609 29	609 29
Oswego	William S. Turner	$3 00	9,214 14	9,217 14	$156 01	9,061 13	9,217 14
Oswego	Henry Quonce	....	5,195 50	5,195 50	91 92	5,103 28	5,195 50
		$3 00	$15,099 20	$15,102 20	$247 93	$14,854 27	$15,102 20

CAYUGA AND SENECA CANAL.							
Syracuse	Edward Drake	....	$327 25	$327 25	....	$327 25	$327 25
Rochester	Frank M. Bottum	....	165 35	165 35	....	165 35	165 35
Geneva	Benjamin W. Kings, Jr	....	784 26	784 26	....	784 26	784 26
		....	$1,276 86	$1,276 86	....	$1,276 86	$1,276 86
BLACK RIVER CANAL.							
Oswego	William S. Turner	....	....	....	....	....	....
Utica	Frank Sang	....	$374 06	$374 06	....	$374 06	$374 06
Boonville	Leander W. Fiske	....	12,863 43	12,863 43	$36 40	12,827 03	12,863 43
Syracuse	Edward Drake	....	67 88	67 88	....	67 88	67 88
		....	$13,305 37	$13,305 37	$36 40	$13,268 97	$13,305 37
ONEIDA RIVER IMPROVEMENT.							
Syracuse	Edward Drake	....	$336 58	$336 58	....	$336 58	$336 58
Oswego	William S. Turner	....	4 95	4 95	....	4 95	4 95
		....	$341 53	$341 53	....	$341 53	$341 53
SENECA RIVER TOWING-PATH.							
Syracuse	Edward Drake	....	$23 95	$23 95	....	$23 95	$23 95
Oswego	William S. Turner	....	4 39	4 39	....	4 39	4 39
Oswego	Henry Quonce	....	1 57	1 57	....	1 57	1 57
		....	$29 91	$29 91	....	$29 91	$29 91
CAYUGA INLET.							
Syracuse	Edward Drake	....	$45 71	$45 71	....	$45 71	$45 71
Rochester	Frank M. Bottum	....	46 58	46 58	....	46 58	46 58
		....	$92 29	$92 29	....	$92 29	$92 29

RECAPITULATION.

	Received.	Paid.		Received.	Paid.
Erie canal	$587,858 76	$587,858 76	Oneida River improvement	$341 53	$341 53
Champlain canal	37,819 08	37,819 08	Seneca River towing-path	29 91	29 91
Oswego canal	15,102 20	15,102 20	Cayuga inlet	92 29	92 29
Cayuga and Seneca canal	1,276 86	1,276 86			
Black River canal	13,305 37	13,305 37		$655,826 00	$655,826 00

(No. 2.)

STATEMENT showing the tons (2,000 pounds) of each article shipped at each office on the several canals, the total tons at each office, and the total tons of each article at all the offices in 1882; also, the total tons at each office, and the total tons of each article at all the offices on the free list for 1882.

OFFICES.	BOATS.	THE FOREST.					AGRICULTURE.		
		PRODUCT OF WOOD.					PRODUCT OF ANIMALS.	VEGETABLE FOOD.	
	No. of miles cleared.	Boards and scantling.	Shingles.	Timber.	Wood.	Ashes, pot and pearl.	Hides.	Wheat.	Rye.
ERIE CANAL.									
Albany	934,257	20,663	80	......	165	......	......	4	......
West Troy	1,870,078	6,889	9	2,666	2,994	......	......	20	643
Utica	178,998	12,758	26	1,236	8,125	......	......	11	......
Syracuse	361,528	7,442	201	1,337	12,836	......	......	23,358	64
Rochester	140,156	5,006	106	......	1,929	......	......	10,334	......
Tonawanda	722,501	544,667	3 136	50,031	3,682	......	......	822	......
Buffalo	1,638,394	146,103	2,726	......	......	......	......	585,197	19,158
CHAMPLAIN CANAL.									
Waterford	181,913	241,317	......	332	11,687	......	......	......	60
Whitehall	253,277	203,196	66	3,474	8,459	......	......	63	800
OSWEGO CANAL.									
Oswego	299,905	296,987	950	500	6	......	......	20,274	22,265
CAYUGA AND SENECA CANAL.									
Geneva	76,793	9,400	......	350	325	......	......	2,132	382
BLACK RIVER CANAL.									
Boonville	158,995	76,497	7	11,905	12,028	......	......	......	......
	6,816,795	1,570,925	7,307	71,831	62,236	......	......	642,215	43,372

STATEMENT No. 2 — (*Continued*).

OFFICES.	AGRICULTURE — Continued.								MANUFACTURES.
	Vegetable Food — Continued.								
	Corn.	Barley.	Barley malt.	Oats.	Bran and ship stuffs.	Peas and beans.	Apples.	Potatoes.	Furniture.
Erie Canal.									
Albany	1,102	5	......	582	132	......	......	......	2
West Troy	605	128	396	260	6	366	85	524	6
Utica	2,170	272	579	11	315	......	103	1,485	12
Syracuse	1,372	5,648	5,938	1,703	2,191	49	74	2,414	13
Rochester	449	3,507	1,009	46	......	......	......	......	......
Tonawanda	73	121	......	......	47	......	......	5	7
Buffalo	241,333	1,737	4,554	9,046	1,302	......	......	......	......
Champlain Canal.									
Waterford	134	......	......	98	......	......	605	11,241	......
Whitehall	......	11,870	......	10,018	......	21	1,251	2,795	1
Oswego Canal.									
Oswego	4,401	70,862	1,616	416	261	5,769	69	58	2
Cayuga and Seneca Canal.									
Geneva	......	2,500	304	......	......	......	......	......	......
Black River Canal.									
Boonville	48	......	......	......	32	......	25	4,229	8
	251,687	96,650	14,396	22,180	4,286	6,205	2,212	22,751	51

STATEMENT No. 2.—(*Continued*).

OFFICES.	MANUFACTURES—Continued.				MERCHANDISE.				
	Pig iron.	Bloom and bar iron.	Castings and iron ware.	Foreign salt.	Sugar.	Molasses.	Nails, spikes and horse shoes.	Iron and steel.	Railr'd iron.
ERIE CANAL.									
Albany	4,423	....	2	478	107	....	....	8,845	10,727
West Troy	34,462	19,842	1,201	8,944	6,009	3,087	1,136	38,649	44,053
Utica	....	....	92	....	......	....	1	486	....
Syracuse	784	163	20	....	.....	....	....	20	2,051
Rochester	579	4	....	....	......	....	....	170	47
Tonawanda	....	....	....	....	.....	....	....	....	....
Buffalo	465	....	269	....	......	....	....	588	....
CHAMPLAIN CANAL.									
Waterford	510	997	....	773	483	1,117	594	127	247
Whitehall	5,759	4,857	111	....	......	....	64	153	1,796
OSWEGO CANAL.									
Oswego	....	....	....	....	......	....	....	......	.....
CAYUGA AND SENECA CANAL.									
Geneva	....	....	....	....	.....	....	....	......	.....
BLACK RIVER CANAL.									
Boonville	....	....	2	....	......	....	....	.....	...
	46,982	25,069	1,697	10,195	6,599	4,204	1,795	49,038	58,921

STATEMENT No. 2.—(*Continued*).

OFFICES.	MERCHANDISE—Continued.		OTHER ARTICLES.							Total tons paying tolls.
	Flint enamel crockery and glassware.	All other merchandise.	Stone, lime and clay.	Gypsum.	Anthracite coal.	Bituminous coal.	Petroleum.	Iron ore.	Sundries.	
ERIE CANAL.										
Albany	....	6,189	10,766	....	45,828	189	....	509	1,609	112,407
West Troy	372	112,030	139,575	....	436,128	2,938	....	12,270	5,181	880,680
Utica	123	2,592	12,094	....	60,661	86	....	3,565	15,869	122,672
Syracuse	207	25,630	9,581	4,695	167,289	49,281	....	3	8,882	333,246
Rochester	340	2,143	8,255	17	237,631	189	....	....	206	271,967
Tonawanda	13	415	91,016	....	539	....	....	....	3,922	698,496
Buffalo	....	363	130	....	....	25,276	210	100	3,030	1,041,587
CHAMPLAIN CANAL.										
Waterford	....	10,112	91,480	142	85,371	2,054	....	13,459	25,157	498,097
Whitehall	....	....	2,769	....	....	....	....	334,455	4,365	596,343
OSWEGO CANAL.										
Oswego	....	165	579	....	4,687	2,339	....	....	1,872	434,078
CAYUGA AND SENECA CANAL.										
Geneva	....	....	....	....	22,942	84,934	....	....	98	123,367
BLACK RIVER CANAL.										
Boonville	....	180	595	....	57	16	....	....	819	106,448
	1,055	159,819	366,840	4,854	1,061,133	167,302	210	364,361	71,010	5,219,388

STATEMENT No. 2 — (*Continued*). FREE LIST.

OFFICES.	THE FOREST.		AGRICULTURE.							
	PRODUCT OF WOOD.		PRODUCT OF ANIMALS.						VEGETABLE FOOD.	
	Staves.	Ashes leached.	Pork.	Beef.	Bacon.	Cheese.	Lard, tallow and lard oil.	Wool.	Flour.	Corn meal.
ERIE CANAL.										
Albany	......	....	3	......	......	......	....	......	282	......
West Troy	463	....	......	......	......	......	75	18	327	......
Utica	......	....	46	......	......	4	1	......	32	33
Syracuse	3,959	....	8	......	......	......	3	......	6,534	1,495
Rochester	440	....	......	......	......	......	....	......	......	......
Tonawanda	275	....	......	......	......	......	....	......	306	51
Buffalo	42,113	1,160	......	......	......	......	1,674	11	817	257
CHAMPLAIN CANAL.										
Waterford	75	273	35	7	......	......	....	......	235	......
Whitehall	......	390	3	......	......	......	....	......	18	......
OSWEGO CANAL.										
Oswego	1,496	8,692	8	......	......	......	....	......	813	......
CAYUGA AND SENECA CANAL.										
Geneva	......	....	......	......	......	......	....	......	......	......
BLACK RIVER CANAL.										
Boonville	108	....	9	......	......	......	....	......	8	40
	48,929	10,515	112	7	......	4	1,753	29	9,372	1,876

STATEMENT No. 2—(*Continued*). FREE LIST.

OFFICES.	AGRICULTURE—Continued.							MANUFACTURES.		
	VEGETA'E FOOD—Conti'ed.	ALL OTHER AGRICULTURAL PRODUCTS.								
	Dried fruit.	Cotton.	Unmanufactured tobacco.	Flax seed.	Hemp.	Clover and grass seed.	Hops.	Domestic spirits.	Oil meal and cake.	Leather.
ERIE CANAL.										
Albany	......	......	......	......	125	......	......	......	......	......
West Troy	1,518	50	10	......	3,764	......	......	20	......	......
Utica	......	......	......	......	......	......	......	1	2	......
Syracuse	56	......	......	......	......	......	......	1	......	......
Rochester	......	......	......	......	......	......	......	......	......	......
Tonawanda	......	......	......	......	......	......	......	......	......	......
Buffalo	......	......	......	48,394	6	227	......	42	3,142	......
CHAMPLAIN CANAL.										
Waterford	......	......	......	......	......	......	......	......	......	......
Whitehall	......	......	......	......	......	......	......	......	......	......
OSWEGO CANAL.										
Oswego	......	......	......	......	......	......	......	......	......	......
CAYUGA AND SENECA CANAL.										
Geneva	......	......	......	......	......	......	......	......	......	......
BLACK RIVER CANAL.										
Boonville	......	......	......	......	......	......	......	......	......	......
	1,574	50	10	48,394	3,895	227	......	64	3,144	......

STATEMENT No. 2 — (*Continued*). FREE LIST.

OFFICES.	MANUFACTURES — Continued.				MERCHANDISE.	OTHER ARTICLES.		Total tons on free list.	Total tons at each office	Total tons on each canal.
	Bar and pig lead.	Domestic woolens.	Domestic cottons.	Domestic salt.	Coffee.	Phosphates.	Live cattle, hogs and sheep.			
ERIE CANAL.										
Albany	....	....	....	....	....	....	....	410	112,817	
West Troy	....	278	590	77	1,743	14,771	137	23,841	904,521	
Utica	....	....	11	47	....	....	20	197	122,869	
Syracuse	....	....	....	84,626	....	335	20	97,037	430,283	
Rochester	....	....	....	12,309	....	376	....	13,125	285,092	
Tonawanda	....	....	....	....	....	....	....	632	699,128	
Buffalo	....	....	....	....	....	224	....	98,067	1,139,654	3,694,364
CHAMPLAIN CANAL.										
Waterford	....	....	1,609	258	....	....	....	2,492	500,589	
Whitehall	....	....	....	....	....	....	....	411	596,754	1,097,343
OSWEGO CANAL.										
Oswego	....	....	....	208	....	....	....	11,217	445,295	445,295
CAYUGA AND SENECA CANAL.										
Geneva	....	....	....	....	....	121	....	121	123,488	123,488
BLACK RIVER CANAL.										
Boonville	....	....	....	320	....	....	....	485	106,933	106,933
	....	278	2,210	97,845	1,743	15,827	177	248,035	5,467,423	5,467,423

(No. 3.)

STATEMENT showing the value of each article shipped at each office on the several canals, the total value at each office, the value of each article at all the offices, and the total on each canal in 1882*; also, the total value at each office, the valne of each article at all of the offices in* 1882 *on the free list.*

OFFICES.	THE FOREST.					AGRICULTURE.			
	PRODUCT OF WOOD.					PRODUCT OF ANIMALS.	VEGETABLE FOOD.		
	Boards and scantling.	Shingles.	Timber.	Wood.	Ashes, pot and pearl.	Hides.	Wheat.	Rye.	Corn.
ERIE CANAL.									
Albany	$272,756	$2,902	......	$310	......	......	$156	$12	$35,431
West Troy	90,926	315	$26,663	5,612	......	......	758	17,231	19,464
Utica	114,828	603	12,360	14,510	......	......	396	......	58,135
Syracuse	98,225	6,043	6,687	18,336	......	......	856,468	1,471	36,746
Rochester	51,064	3,400	......	4,134	......	......	366,445	......	12,038
Tonawanda	6,536,013	75,276	625,385	2,630	......	......	27,368	......	1,560
Buffalo	1,753,230	87,244	......	......	......	......	21,457,223	485,791	6,895,236
CHAMPLAIN CANAL.									
Waterford	3,185,393	......	3,320	21,914	......	......	......	1,625	4,296
Whitehall	2,194,514	1,862	12,158	12,084	......	......	2,297	20,012	......
OSWEGO CANAL.									
Oswego	3,563,844	26,957	7,000	10	......	......	709,602	795,202	102,166
CAYUGA AND SENECA CANAL.									
Geneva	67,680	......	3,850	406	......	......	71,068	9,556	......
BLACK RIVER CANAL.									
Boonville	688,479	140	119,055	12,888	......	......	......	......	1,371
	$18,616,952	$204,382	$816,478	$92,834	......	......	$23,491,781	$1,330,900	$7,166,443

STATEMENT No. 3—(*Continued*).

OFFICES.	AGRICULTURE—Continued.							MANUFACTURES.	
	VEGETABLE FOOD—Continued.								
	Barley.	Barley malt.	Oats.	Bran and ship stuffs.	Peas and beans.	Apples.	Potatoes.	Furniture.	Pig iron.
ERIE CANAL.									
Albany	$196	....	$16,744	$2,640	....	....	....	$800	$88,450
West Troy	4,801	$25,176	7,481	120	$27,419	$3,099	$13,090	2,380	689,227
Utica	11,315	40,800	356	6,305	....	2,046	29,682	11,613	....
Syracuse	176,487	349,272	47,881	65,737	3,292	1,962	48,277	1,238	23,520
Rochester	124,225	53,360	1,465	....	....	....	....	....	14,463
Tonawanda	5,016	....	....	930	....	....	103	1,200	....
Buffalo	72,357	308,052	254,420	26,046	....	....	....	....	11,620
CHAMPLAIN CANAL.									
Waterford	....	....	2,821	....	....	22,182	281,034	....	10,213
Whitehall	494,594	....	281,772	....	1,050	41,702	55,893	40	143,967
OSWEGO CANAL.									
Oswego	2,657,312	104,588	12,982	5,223	211,527	2,745	1,168	1,075	....
CAYUGA AND SENECA CANAL.									
Geneva	88,522	17,856	....	....	....	....	....	....	....
BLACK RIVER CANAL.									
Boonville	....	....	....	965	....	1,356	63,434	320	....
	$3,634,825	$899,104	$625,925	$107,966	$243,288	$75,092	$492,681	$18,666	$981,460

STATEMENT No. 3 — (*Continued*).

OFFICES.	MANUFACTURES—Continued.			MERCHANDISE.						
	Bloom and bar iron.	Castings and iron ware	Foreign salt.	Sugar.	Molasses.	Nails, spikes and horse shoes.	Iron and steel.	Railroad iron.	Flint enamel crockery and glassware.	All other merchandise.
ERIE CANAL.										
Albany	....	$240	$7,640	$17,120	....	....	$1,061,400	$536,325	....	$2,228.152
West Troy	$952,400	216,243	134,160	961,448	$308,685	$73,860	4,637,880	2,202,640	$148,920	40.330,782
Utica	....	14,827	11	....	47	235	38,883	....	24,636	518,333
Syracuse	9,756	1,975	....	....	....	....	1,915	82,003	16,538	2,563,028
Rochester	191	....	....	....	....	....	50,865	2,357	27,188	1,071,716
Tonawanda	....	....	....	....	....	....	....	....	2,000	41,519
Buffalo	....	53,837	....	....	....	....	32,342	....	....	36,272
CHAMPLAIN CANAL.										
Waterford	49,845	....	11,593	77,280	111,710	38,578	15,276	12,368	....	3,640,356
Whitehall	194,268	11,116	....	....	....	19,200	15,284	71,850	....	....
OSWEGO CANAL.										
Oswego	....	....	....	....	....	....	....	....	....	6,617
CAYUGA AND SENECA CANAL.										
Geneva	....	....	....	....	....	....	....	....	....	....
BLACK RIVER CANAL.										
Boonville	....	150	....	....	....	....	....	....	....	46,689
	$1,206,460	$298,388	$153,404	$1,055,848	$420,442	$131,873	$5,853,845	$2,907,543	$219,282	$50,483,464

STATEMENT No. 3 — (*Continued*).

OFFICES.	OTHER ARTICLES.							Total paying toll.
	Stone, lime and clay.	Gypsum	Anthracite coal.	Bituminous coal.	Petroleum.	Iron ore.	Sundries.	
ERIE CANAL.								
Albany	$107,655	....	$274,965	$754	....	$30,510	$199,080	$4,884,238
West Troy	1,395,747	....	2,616,772	11,752	....	73,618	621,744	55,620,413
Utica	113,606	....	242,647	516	....	14,261	317,385	1,588,336
Syracuse	9,581	$4,695	669,156	147,843	....	15	888,248	6,136,395
Rochester	825,468	67	1,188,156	567	....	....	41,291	3,838,460
Tonawanda	120,140	....	2,694	....	....	....	392,217	7,834,051
Buffalo	1,300	....	....	101.105	$5,995	667	303,023	31,885,760
CHAMPLAIN CANAL.								
Waterford	914,806	568	512,226	8,214	....	80,753	3,018,828	12,025,199
Whitehall	55,382	....	....	....	....	1,672,273	436,456	5,737,774
OSWEGO CANAL.								
Oswego	347	....	23,433	8,185	....	....	187,207	8,426,833
CAYUGA AND SENECA CANAL.								
Geneva	....	....	103,239	318,502	....	....	490	681,169
BLACK RIVER CANAL.								
Boonville	4,759	....	456	159	....	....	3,276	943,497
	$3,548,791	$5,330	$5,633,744	$597,597	$5,995	1,872,097	$6,409,245	$139,602,125

STATEMENT No. 3 — (*Continued*). FREE LIST.

OFFICES	THE FOREST.		AGRICULTURE.								
	PRODUCT OF WOOD.		PRODUCT OF ANIMALS.						VEGETABLE FOOD.		
	Ashes leached.	Staves.	Pork.	Cheese.	Bacon.	Beef.	Lard, tallow and lard oil.	Wool.	Flour.	Corn meal.	Dried fruit.
ERIE CANAL.											
Albany	....	...	$336	....	.....	...	....	....	$16,978	....	....
West Troy	....	$9,262	53	.....	....	.....	$25,500	$14,400	22,733	......	$607,080
Utica	....	...	5,800	$717	$34	....	310	......	2,400	$1,232	......
Syracuse	....	79,181	1,000	....	....	....	660	....	363,036	48,451	11,220
Rochester	......	4,398	......	....	....	.....	....	....	....	....	....
Tonawanda	....	4,400	.....	....	....	......	....	......	19,789	1,425	....
Buffalo	$3,867	421,127	....	.....	......	....	418,488	6,329	45,402	8,337	....
CHAMPLAIN CANAL.											
Waterford	1,092	1,500	3,850	....	.....	$810	....	....	16,335	....	......
Whitehall	2,600	......	360	....	......	....	....	....	1,162	......	....
OSWEGO CANAL.											
Oswego	17,384	8,975	960	......	......	....	....	......	37,655	....	......
CAYUGA AND SENECA CANAL.											
Geneva	......	......	....	....	....	......	....	.....	......	....	....
BLACK RIVER CANAL.											
Boonville	....	1,080	1,375	......	....	....	....	....	580	1,299	....
	$24,943	$529,923	$13,734	$717	$34	$810	$444,958	$20,729	$526,070	$60,744	$618,300

STATEMENT No. 3—(*Continued*). FREE LIST.

OFFICES.	AGRICULTURE—Continued.						MANUFACTURES.			
	ALL OTHER AGRICULTURAL PRODUCTS.									
	Cotton.	Unmanufactured tobacco.	Hemp.	Clover and grass seed.	Hops.	Flax seed.	Domestic spirits.	Oil meal and cake.	Leather.	Bar and pig lead.
ERIE CANAL.										
Albany	......	......	$25,000	......	......	......	......	......	......	......
West Troy	$10,000	$4,800	752,830	......	......	......	$6,380	......	......	......
Utica	......	......	......	......	......	......	1,245	$160	......	......
Syracuse	......	......	......	......	......	......	600	......	......	......
Rochester	......	......	......	......	......	......	......	......	......	......
Tonawanda	......	......	......	......	......	......	......	......	......	......
Buffalo	......	......	1,261	$40,944	......	$2,177,751	15,671	188,542	......	......
CHAMPLAIN CANAL.										
Waterford	......	......	......	......	......	......	......	......	......	......
Whitehall	......	......	......	......	......	......	......	......	......	......
OSWEGO CANAL.										
Oswego	......	......	......	......	......	......	......	......	......	......
CAYUGA AND SENECA CANAL.										
Geneva	......	......	......	......	......	......	......	......	......	......
BLACK RIVER CANAL.										
Boonville	......	......	......	......	......	......	......	......	......	......
	$10,000	$4,800	$779,091	$40,944	......	$2,177,751	$23,896	$188,702	......	......

STATEMENT No. 3 — (*Continued*). FREE LIST.

OFFICES.	MANUFACTURES — Continued.			MERCHANDISE.	OTHER ARTICLES.		Total value of the free list.	Total value.	Total on each canal.
	Domestic woolens.	Domestic cottons.	Domestic salt.	Coffee.	Live cattle, hogs and sheep.	Phosphates.			
ERIE CANAL.									
Albany	....	....	....	....	....	....	$42,314	$4,926,552	
West Troy	$244,244	$236,040	$463	$697,120	$10,968	$295,412	2,937,285	58,557,698	
Utica	....	4,580	466	....	4,000		20,944	1,609,280	
Syracuse	....	....	564,169	....	2,400	10,047	1,080,764	7,217,159	
Rochester	....	....	73,852	....	....	15,035	93,285	3,931,745	
Tonawanda	....	....	....	....	....	....	25,614	7,859,665	
Buffalo	....	....	....	....	....	8,960	3,336,679	35,222,439	
									$119,324,538
CHAMPLAIN CANAL.									
Waterford	....	643,420	1,548	....	....	....	668,555	$12,693,754	
Whitehall	....	....	....	....	....	....	4,122	5,741,896	
									18,435,650
OSWEGO CANAL.									
Oswego	....	....	1,660	....	....	....	66,634	$8,493,467	8,493,467
CAYUGA AND SENECA CANAL.									
Geneva	....	....	....	....	....	4,230	4,230	685,399	685,399
BLACK RIVER CANAL.									
Boonville	....	....	32,022	....	....	....	36,356	979,853	979,853
	$244,244	$884,040	$674,180	$697,120	$17,368	$333,684	$8,316,782	$147,918,907	$147,918,907

(No. 4.)

STATEMENT showing the amount of tolls received on each article shipped at each office on the several canals, the total tolls received at each office, and on each canal, and the total received on each article at all the offices during the year 1882.

OFFICES.	Yachts and pleasure boats.	THE FOREST.				AGRICULTURE.					
		PRODUCT OF WOOD.				VEGETABLE FOOD.					
		Boards and scantling.	Shingles.	Timber.	Wood.	Wheat.	Rye.	Corn.	Barley.	Barley malt.	Oats.
ERIE CANAL.											
Albany	....	$4,514	$2	....	$8	$1	....	$1	$1	...	....
West Troy	$144	1,201	1	$585	84	254	$39	86	97	$45	$13
Utica	77	1,119	1	209	141	22	......	145	3	70	......
Syracuse	384	256	6	219	150	2,019	16	120	915	1,221	342
Rochester	22	1,029	8	5	8	2,666	......	123	782	59	19
Tonawanda	94	153,377	647	15,336	17	80	....	....	....	....	......
Buffalo	102	39,547	644	......	....	196,339	6,565	79,399	593	1,524	3,092
CHAMPLAIN CANAL.											
Waterford	13	8,079	......	28	193	....	1	......	......	....	5
Whitehall	33	10,262	2	515	172	4	55	......	247	......	631
OSWEGO CANAL.											
Oswego	38	44,894	122	......	......	1,586	4,477	6	13,107	325	82
CAYUGA AND SENECA CANAL.											
Geneva	30	301	....	6	2	218	85	......	511	4	....
BLACK RIVER CANAL.											
Boonville	....	12,228	......	6,135	276	....	....	....	....	......	......
	$937	$276,807	$1,433	$23,038	$1,051	$203,129	$11,238	$79,880	$16,256	$3,248	$4,184

STATEMENT No. 4 — (*Continued*).

OFFICES.	AGRICULTURE — Continued.				MANUFACTURES.				MERCHANDISE.		
	VEGETABLE FOOD — Continued.										
	Bran and ship stuffs.	Peas and beans.	Apples.	Potatoes.	Furniture.	Pig iron.	Bloom and bar iron.	Castings and iron ware.	Railroad iron.	Nails, spikes and horse shoes.	Iron and steel.
ERIE CANAL.											
Albany	......	......	......	......	......	......	......	......	......	......	......
West Troy	......	$7	$1	$43	......	$1	$1	$1	$1	......	......
Utica	$8	......	2	176	......	......	......	15	......	......	$57
Syracuse	47	2	14	509	......	80	......	......	20	......	......
Rochester	......	......	......	......	......	......	......	......	......	......	......
Tonawanda	3	......	......	......	......	......	......	......	......	......	......
Buffalo	116	......	......	......	......	106	......	78	......	......	156
CHAMPLAIN CANAL.											
Waterford	......	......	21	403	......	13	......	......	......	......	......
Whitehall	......	2	81	192	......	388	315	7	117	$4	10
OSWEGO CANAL.											
Oswego	9	1,131	14	12	......	......	......	......	......	......	......
CAYUGA AND SENECA CANAL.											
Geneva	......	......	......	......	......	......	......	......	......	......	......
BLACK RIVER CANAL.											
Boonville	2	......	1	1,413	......	......	......	......	......	......	......
	$185	$1,142	$134	$2,748	......	$588	$316	$101	$138	$4	$223

STATEMENT No. 4 — (*Continued*).

OFFICES.	MERCHANDISE — Continued.		OTHER ARTICLES.							Total tolls at each office.	Total on each canal.
	Flint enamel crockery and glassware.	All other merchandise.	Stone, lime and clay.	Gypsum	Anthracite coal.	Bituminous coal.	Iron ore.	Petroleum.	Sundries.		
ERIE CANAL.											
Albany	....	......	....	......	......	$1	....	......	$390	$4,918	
West Troy	$4	$661	$571	......	....	21	$41	......	49	3,951	
Utica	8	40	726	......	$314	1	195	......	327	3,663	
Syracuse	19	761	411	.....	890	829	....	......	278	9,547	
Rochester	1	133	253	......	209	16	....	......	9	5,282	
Tonawanda	....	......	2	......	1	....	....	......	18	169,575	
Buffalo	....	70	1	......	......	1,699	1	$5	670	330,707	$527,643
CHAMPLAIN CANAL.											
Waterford	....	24	3,306	......	....	....	394	......	880	$13,360	
Whitehall	....	......	134	......	....	....	10,883	......	282	24,336	37,696
OSWEGO CANAL.											
Oswego	....	5	4	......	30	20	....	......	54	$65,916	65,916
CAYUGA AND SENECA CANAL.											
Geneva	....	....	....	......	194	2,863	....	......	5	4,219	4,219
BLACK RIVER CANAL.											
Boonville	....	8	33	......	1	......	....	......	255	20,352	20,352
	$32	$1,702	$5,441	....	$1,639	$5,450	11,514	$5	$3,217	$655,826	$655,826

(No. 5.)

STATEMENT made up from the tables numbered 2, 3 and 4, showing the tons and value of, and the tolls paid on each article transported on all the canals during the year 1882, with the total movement of number of tons carried one mile.

ARTICLES.	Quantity.	Tons.	Value.	Tolls.	Rate per ton per mile.			Number of tons moved one mile.
					c.	m.	f.	
Yachts and pleasure boats, toll at five cents on				$937				
THE FOREST. *Product of Wood.*								
Boards and scantling, 1000 feet	942,555,000	1,570,925	$18,616,952	$276,807	0	1	5	184,538,000
Shingles, M	58,456	7,307	204,382	1,433	0	1	0	1,433,000
Timber, 100 cubic feet	3,591,550	71,831	816,417	23,038	0	2	5	9,215,200
Wood, cords	22,227	62,236	92,834	1,051	0	0	7	1,501,428
Ashes, pot and pearl, barrels								
Total of the forest; tons, value, tolls		1,712,299	$19,730,646	$302,329				196,687 628
AGRICULTURE. *Product of Animals.*								
Hides, pounds								
Total product of animals; tons, value, tolls								
Vegetable Food.								
Wheat, bushels	21,407,166	642,215	$23,491,781	$203.129	0	1	0	203, 129,000
Rye, bushels	1,549,000	43,372	1,330,900	11,238	0	1	0	11,238.000
Corn, bushels	8,988,821	251,687	7,166,443	79,880	0	1	0	79,880,000
Barley, bushels	4,027,083	96,650	3,634,825	16,256	0	1	0	16,256,000
Barley malt, bushels	846, 824	14,396	899,104	3,248	0	1	0	3,248,000
Oats, bushels	1,386,250	22,180	625,925	4,184	0	1	0	4,184,000
Bran and ship stuffs, pounds	8,572,000	4,286	107,966	185	0	1	0	185,000
Peas and beans, bushels	206, 834	6,205	243,288	1,142	0	1	0	1,142,000
Apples, barrels	29,493	2,212	75,092	134	0	1	0	134,000
Potatoes,bushels	758,367	22,751	492,681	2,748	0	1	0	2,748,000
Total vegetable food; tons, value, tolls		1,105,954	$38,068,005	$322,144				322,144,000
Total agricultural products; tons, value		1,105,954	$38,068,005	$322,144				322,144,000

STATEMENT No. 5 — (*Continued.*)

ARTICLES.	Quantity.	Tons.	Value	Tolls.	Rate per ton per mile.			Number of tons moved one mile.
					c.	m.	f.	
MANUFACTURES.								
Furniture, pounds	102,000	51	$18,666					
Pig iron, pounds	93,964,000	46,982	981,460	$588	0	1	0	588,000
Bloom and bar iron, pounds	50,138,000	25,069	1,206,460	316	0	1	0	316,000
Castings and iron ware, pounds	3,394,000	1,697	298,388	101	0	1	0	101,000
Foreign salt, pounds	20,390,000	10,195	153,404	1	0	2	5	400
Total manufactures; tons, value, tolls		83,994	$2,658,378	$1,006				1,005,400
MERCHANDISE.								
Sugar, pounds	13,198,000	6,599	$1,055,848					
Molasses, pounds	8,408,000	4,204	420,442					
Nails, spikes and horse shoes, pounds	3,590,000	1,795	131,873	$4	0	1	0	4,000
Iron and steel, pounds	98,076,000	49,038	5,853,845	223	0	1	0	223,000
Railroad iron, pounds	117,842,000	58,921	2,907,543	138	0	1	0	138,000
Flint, enamel, crockery and glassware, pounds	2,110,000	1,055	219,282	32	0	1	0	32,000
All other merchandise, pounds	319,638,000	159,819	50,483,464	1,702	0	1	0	1,702,000
Total merchandise; tons, value, tolls		281,431	$61,072,297	$2,099				2,099,000
Other Articles.								
Stone lime and clay, pounds	733,680,000	366,840	$3,548,791	$5,441	0	1	0	5,441,000
Gypsum, pounds	9,708,000	4,854	5,330					
Anthracite coal, pounds	2,122,266,000	1,061,133	5,633,744	1,639	0	0	2½	6,556,000
Bituminous coal, pounds	334,604,000	167,302	597,597	5,450	0	0	2½	21,800,000
Copper ore, pounds								
Iron ore, pounds	728,722,000	364,361	1,872,097	11,514	0	0	5	23,028,000
Petroleum or earth oil, crude and refined, barrels	1,200	210	5,995	5	0	0	5	10,000
Sundries, pounds	142,020,000	71,010	6,409,245	3,262	0	1	0	3,262,000
Total other articles: tons, value, tolls		2,035,710	$18,072,799	$27,311				60,097,000
Total tons, value, tolls		5,219,388	$139,602,125	$655,826				582,033,028

STATEMENT No. 5 — (*Continued*). FREE LIST.

ARTICLES.	Quantity.	Tons.	Value.
BOATS.			
Total miles of boats cleared	6,816,795	...	...
THE FOREST.			
Fur and peltry, pounds	...	...	...
Staves and headings, pounds	97,853,000	48,929	$529,923
Ashes, leached, bushels	350,500	10,515	24,943
Total of the forest; tons, value	...	59,444	$554,866
AGRICULTURE. *Product of Animals.*			
Pork, barrels	700	112	$13,734
Beef, barrels	44	7	810
Bacon, pounds	...	...	34
Butter, pounds	...	...	...
Lard, tallow and lard oil, pounds	3,506,000	17,553	444,958
Cheese, pounds	8,000	4	717
Wool, pounds	58,000	29	20,729
Total product of animals; tons, value	...	1,905	$480,982
Vegetable Food.			
Flour, barrels	86,777	9,372	$526,070
Corn meal, barrels	17,370	1,876	60,744
Dried fruit, pounds	3,148,000	1,574	618,300
Total vegetable food; tons, value	...	12,822	$1,205,114
All other Agricultural Products.			
Cotton, pounds	100,000	50	$10,000
Unmanufactured tobacco, pounds	20,000	10	4,800
Hemp, pounds	7,790,000	3,895	779,091
Clover and grass seed pounds	454,000	227	40,944
Hops, pounds	...	...	...
Flax seed, pounds	96,788 000	48,394	2,177,751
Total all other agricultural products; tons, value	...	52,576	$3,012,586
Total Agricultural products; tons, value	...	67,303	$4,698,682

STATEMENT No. 5 — (*Continued.*) FREE LIST.

ARTICLES.	Quantity.	Tons.	Value.
MANUFACTURES.			
Domestic spirits, gallons	16,000	64	$23,896
Leather, pounds			
Oil meal and cake, pounds	6,288,000	3,144	188,702
Bar and pig lead, pounds			
Domestic woolens, pounds	556,000	278	244,040
Domestic cottons, pounds	4,420,000	2,210	884,040
Domestic salt, pounds	195,690,000	97,845	674,180
Total manufactures; tons, value		103,541	$2,015,062
MERCHANDISE.			
Coffee, pounds	3,486,000	1,743	$697,120
Total merchandise; tons, value		1,743	$697,120
Other Articles.			
Live cattle, hogs and sheep, pounds	354,000	177	$17,368
Rock phosphates, and super-phosphates and Albemarle, pounds	31,654,000	15,827	333,684
Total other articles; tons, value		16,004	$351,052
Total tonnage and value of free list		248,035	$8,316,782
Total		5,467,423	$147,918,907

(No. 6.)

STATEMENT of all the property that came to the Hudson river on the canals in 1882, with the quantity and estimated value of each article in Albany and Troy.

ARTICLES.	QUANTITY.		TONS.			Estimated value of each article.
	Erie.	Champlain.	Erie.	Champlain.	Total.	
THE FOREST.						
Fur and peltry, pounds						
Product of Wood.						
Boards and scantling, feet	522,627,693	266,408,307	871,046	444,014	1,315,060	$17,358,792
Shingles, M	12,840		1,605		1,605	57,780
Timber, cubic feet	1,355,327	145,938	27,106	2,919	30,025	300,253
Staves and heading, pounds	47,213,400		23,607		23,607	472,134
Wood, cords	1,190	4,998	3,332	13,994	17,326	32,487
Ashes, pot and pearl, barrels						
Ashes, leached, bushels	327,628	12,149	9,829	364	10,193	40,773
Total of the forest			936,525	461,291	1,397,816	$18,262,219
AGRICULTURE.						
Product of Animals.						
Pork, barrels	50	18	8	3	11	$1,190
Beef, barrels						
Bacon, pounds						
Cheese, pounds						
Butter, pounds						
Lard, tallow and lard oil, pounds	3,355,600		1,678		1,678	570,452
Wool, pounds	30,000		15		15	12,000
Hides, pounds						
Total product of animals			1,701	3	1,704	$583,642
Vegetable Food.						
Flour, barrels	1,160	809	125	87	212	$14,768
Wheat, bushels	19,444,563	2,089	583,337	63	583,400	22,363,650
Rye, bushels	1,490,646	30,179	41,738	845	42,583	1,140,619
Corn, bushels	7,284,673		203,971		203,971	6,556,206
Corn meal, barrels						
Barley, bushels	2,785,930	488,028	66,862	11,713	78,575	2,946,562
Barley malt, bushels	755,509		12,844		12,844	815,950

STATEMENT No. 6 — (*Continued.*)

ARTICLES.	QUANTITY.		TONS.			Estimated value of each article.
	Erie.	Champlain.	Erie.	Champlain.	Total.	
Oats, bushels	680,155	626,216	10,882	10,019	20,901	$600,931
Bran and ship stuffs, pounds	331,900		166		166	3,319
Peas and beans, bushels	191,297	700	5,739	21	5,760	431,993
Apples, barrels	2,866	26,618	215	1,996	2,211	81,081
Potatoes, bushels	264,638	467,866	7,939	14,036	21,975	549,378
Dried fruit, pounds	50,000		25		25	10,000
Total vegetable food			933,843	38,780	972,623	$35,514,457
All other Agricultural Products.						
Cotton, pounds						
Unmanufactured tobacco, pounds						
Hemp, pounds	12,600		6		6	$1,260
Clover and grass seed, pounds	363,000		182		182	29,040
Flax seed, pounds	99,605,200		49,803		49,803	2,988,156
Hops, pounds						
Total all other agricultural products			49,991		49,991	$3,018,456
Total agricultural products			985,535	38,783	1,024,318	$39,116,555
MANUFACTURES.						
Domestic spirits, gallons	248		1		1	$322
Oil meal and cake, pounds	5,844,000		2,922		2,922	116,880
Leather, pounds						
Furniture, pounds	3,500		2		2	700
Bar and pig lead, pounds		1,000		1	1	50
Pig iron, pounds	470,400	11,859,100	235	5,930	6,165	123,295
Bloom iron, pounds		9,055,631		4,528	4,528	226,391
Castings and iron ware, pounds	17,500	223,000	9	111	120	21,645
Domestic woolens, pounds						
Domestic cottons, pounds	1,900	2,148,900	1	1,074	1,075	430,160
Domestic salt, pounds	94,123,300		47,062		47,062	282,370
Foreign salt, pounds						
Total manufactures			50,232	11,644	61,876	$1,201,813

MERCHANDISE.						
Sugar, pounds						
Molasses, pounds						
Coffee, pounds						
Nails, spikes and horse shoes, pounds		128,000		64	64	$4,160
Iron and steel (bars, bundles and sheets), pounds	295,500	1,240,400	148	620	768	92,154
Railroad iron, pounds	1,173,900	3,592,500	587	1,796	2,383	119,160
Flint, enamel, crockery and glassware, pounds	192,400		96		96	38,480
All other merchandise, pounds	35,798,200	5,888,300	17,899	2,944	20,843	7,503,570
Total merchandise			18,730	5,424	24,154	$7,757,524
Other Articles.						
Live cattle, hogs and sheep, pounds						
Stone lime and clay, pounds	79,317,500	165,668,100	39,659	82,834	122,493	$1,224.928
Gypsum, pounds						
Phosphate (rock and super) and albemarle, pounds						
Anthracite coal, pounds	1,122,700		561		561	2,368
Bituminous coal, pounds	121,966,400		60,983		60,983	243,933
Copper ore, pounds						
Iron ore, pounds	2,266,500	675,283 195	1,133	337,642	338,775	2,032,649
Petroleum or earth oil, crude and refined, barrels						
Sundries, pounds	18,163,700	56,188 800	9,082	28,094	37,176	4,461,150
Total other articles			111,418	448,570	559,988	$7,965,028
Total			2,102,440	965,712	3,068,152	$74,503,139

(No. 7.)

The number of tons going from tide-water in 1882, *was as follows :*

FROM	Merchandise.	Furniture.	Other articles.	Total.
Albany	25,868	2	66,091	91,961
West Troy	181,412	6	648,143	829,561
Waterford	11,862		101,619	116,481
	219,142	8	818,853	1,038,003

The merchandise cleared, as above, was left on the several canals in the following proportions, viz.:

On the Erie canal	196,463
Champlain canal	18,858
Oswego canal	3,342
Black River canal	479
Total	219,142

(No. 8.)

STATEMENT showing the quantity and tons of each article coming from other States during the year 1882.

ARTICLES.	QUANTITY.			TONS.			Total tons.
	Buffalo and Tonawanda.	Oswego.	Whitehall.	Buffalo and Tonawanda.	Oswego.	Whitehall.	
THE FOREST.							
Fur and peltry, pounds							
Product of Wood.							
Boards and scantling, feet	413,798,333	178,192,213	114,213,103	689,664	296,987	190,355	1,177,006
Shingles, M	20,942	7,599	30	2,618	950	4	3,572
Timber, cubic feet	2,501,542		43,027	50,031		860	50,891
Staves and heading, pounds	84,775,390	2,991,633		42,388	1,496		43,884
Wood, cords		2			6		6
Ashes, pot and pearl, barrels							
Ashes, leached, bushels	38,667	289,741	8,000	1,160	8,692	240	10,092
Total of the forest				785,861	308,131	191,459	1,285,451
AGRICULTURE. *Product of Animals.*							
Pork, barrels							
Beef, barrels							
Bacon, pounds							
Cheese, pounds							
Butter, pounds							
Lard, tallow and lard oil, pounds	2,210,869			1,105			1,105
Wool, pounds	21,096			11			11
Hides, pounds							
Total product of animals				1,116			1,116
Vegetable Food.							
Flour, barrels			166			18	18
Wheat, bushels	19,514,316	597,481	2,088	585,429	17,924	63	603,416
Rye, bushels	684,212	795,202	22,897	19,158	22,266	641	42,065
Corn, bushels	8,619,545	157,158		241,347	4,401		245,748
Corn meal, barrels							
Barley, bushels	69,887	2,952,569	426,524	1,677	70,862	10,237	82,776
Barley malt, bushels		11,900			202		202

Oats, bushels	565,377	25,969	611,584	9,046	416	9,785	19,247
Bran and ship stuffs, pounds							
Peas and beans, bushels		192,297	700		5,769	21	5,790
Apples, barrels							
Potatoes, bushels			175			5	5
Dried fruit, pounds							
Total vegetable food				856,657	121,840	20,770	999,267
All other Agricultural Products.							
Cotton, pounds							
Unmanufactured tobacco, pounds							
Hemp, pounds	12,611			6			6
Clover and grass seed, pounds							
Flax seed, pounds	96,788,955			48,394			48,394
Hops, pounds							
Total all other agricultural products				48,400			48,400
Total agricultural products				906,173	121,840	20,770	1,048,783
MANUFACTURES.							
Domestic spirits, gallons							
Oil meal and cake, pounds							
Leather, pounds							
Furniture, pounds							
Bar and pig lead, pounds							
Pig iron, pounds	929,600			465			465
Bloom and bar iron, pounds							
Castings and iron ware, pounds							
Domestic woolens, pounds							
Domestic cottons, pounds							
Domestic salt, pounds							
Foreign salt, pounds							
Total manufactures				465			465
MERCHANDISE.							
Sugar, pounds							
Molasses, pounds							
Coffee, pounds							
Nails, spikes and horse shoes, pounds							
Iron and steel, pounds							
Railroad iron, pounds			167,800			84	84
Flint, enamel, crockery and glassware, pounds							
All other merchandise, pounds							
Total merchandise						84	84

STATEMENT No. 8 — (*Continued.*)

ARTICLES.	QUANTITY.			TONS.			Total tons.
	Buffalo and Tonawanda,	Oswego.	Whitehall.	Buffalo and Tonawanda.	Oswego.	Whitehall.	
Other Articles.							
Live cattle, hogs and sheep, pounds							
Stone lime and clay, pounds			692,880			346	346
Gypsum, pounds							
Phosphate (rock and super) and albemarle, pds							
Anthracite coal, pounds							
Bituminous coal, pounds	50,552,669			25,276			25,276
Copper ore, pounds							
Iron ore, pounds	200.000			100			100
Petroleum or earth oil, crude and refined, barrels.	1,199			210			210
Sundries, pounds		469,112	1,525,180		235	763	998
Total other articles				25.586	235	1,109	26,930
Total				1,718,085	430,206	213,422	2,361,713

(No. 9.)

STATEMENT of the tons of merchandise, furniture and salt going to other States in 1882.

	Merchandise.	Furniture.	Salt.
By way of Buffalo	163,448	1	....
Oswego	1,925	....	125
Whitehall	11,706	....	3,203
	177,079	1	3,328

The merchandise and furniture by way of Buffalo and Oswego went to other States as follows, viz.:

STATES.	By way of Buffalo.		By way of Oswego.	
	Merchandise.	Furniture.	Merchandise.	Furniture.
Pennsylvania	4,211	....	....	....
Ohio	32,218	....	....	....
Michigan	4,596	....	16	....
Indiana	1,404	....	....	....
Illinois	78,998	1	326	....
Wisconsin	6,907	....	81	....
Kentucky	552	....	126	....
Missouri	3,064	....	46	....
Tennessee	21	....	....	....
Minnesota	3,243	....	....	....
Iowa	2,165	....	33	....
Canada	26,069	....	1 297	....
	163,448	1	1,925	....

The merchandise and furniture by way of Whitehall, in 1882, went to other States as follows, viz.:

STATES.	Merchandise.	Furniture.
Vermont	6,016	....
Canada	5,690	....
	11,706	....

(No. 10.)

STATEMENT of the tolls collected at each office on the New York State canals, for different years, from 1857 *to* 1882, *both inclusive.*

OFFICES.	1857.	1858.	1859.	1860.	1861.	1862.	1863.
New York	$165,442	$84,318	$64,383	$118,773	$87,526	$71,934	$79,543 77
Albany	74,324	71,858	65,298	45,847	38,106	63,794	54,111 73
West Troy	232,438	122,210	99,233	202,733	142,487	237,474	244,466 31
Schenectady	9,525	5,173	6,591	6,155	5,920	3,607	3,631 00
Fultonville	4,652	4,643	5,004	4,654	9,113	5,513	6,183 56
Little Falls	5,920	5,028	3,937	4,177	4,297	2,807	3,585 11
Utica	36,224	31,230	23,511	37,517	34,151	36,476	39,680 40
Rome	32,412	32,993	32,124	27,848	26,518	29,760	27,756 18
Syracuse	31,152	31,292	35,379	51,933	60,290	64,904	59,176 10
Jordan*	38,490	38,464	25,906	....	....	....	....
Montezuma	18,690	22,317	23,557	127,426	276,868	278,195	103,699 59
Lyons†	8,436	9,897	9,722	8,898	10,644	....	....
Palmyra	10,473	14,994	21,131	34,438	15,145	17,244	21,261 34
Rochester	76,916	89,724	57,715	88,365	101,715	133,758	129,112 11
Brockport	24,819	101,171	37,270	55,415	33,041	6,394	10,341 36
Albion	16,798	14,378	9,796	30,026	15,567	39,676	43,243 68
Medina†	11,800	16,296	12,361	18,036	14,156	....	....
Lockport	17,331	30,503	24,041	30,996	32,264	56,464	81,201 00
Tonawanda	30,272	30,291	27,948	73,774	41,535	51,367	59,668 77
Black Rock‡	....	....	....	....	....	....	....

Buffalo	198,470	719,683	552,432	1,137,316	2,102,000	3,084,082	2,682,335 27
Waterford	16,044	14,760	16,019	17,735	15,034	23,070	26,299 72
Schuylerville	9,030	....	....	....	....	....	....
Glens Falls§	11,162	....	....	....	....	....	....
Fort Edward	....	17,912	19,673	19,832	22,545	21,262	28,322 16
Whitehall	51,976	51,072	58,056	67,203	41,053	63,048	88,123 56
Salina	13,908	102,353	23,906	20,627	27,029	37,541	45,052 26
Phœnix	20,282	46,508	17,159	100,952	24,752	35,337	27,591 21
Oswego	270,638	194,135	232,774	439,888	539,434	586,759	537,706 84
Seneca Falls†	9,283	10,158	5,902	9,624	10,059	....	....
Geneva	17,452	20,630	23,651	35,332	27,409	43,210	44,178 68
Ithaca*	12,008	6,157	8,851	....	....	....	....
Havana	10,672	4,886	7,740	11,089	11,730	16,522	16,334 10
Horseheads	16,228	22,292	26,516	38,651	30,355	39,170	22,959 12
Corning	53,869	45,309	46,679	30,423	21,214	31,299	52,686 02
Dresden§	....	....	....	....	....	....	....
Penn Yan	8,833	9,905	7,736	10,287	8,412	13,111	6,876 03
Hamilton	4,959	3,367	3,324	2,682	3,501	2,330	3,598 64
Oxford	2,681	1,910	2,392	2,129	2,204	2,081	2,273 42
Binghamton	7,789	7,129	9,606	15,184	15,728	14,574	15,781 19
Scottsville†	3,330	4,004	2,257	4,535	2,884	....	....
Mount Morris	11,372	10,338	11,170	8,682	6,422	9,276	6,314 54
Dansville	4,252	4,277	2,636	3,449	1,741	1,480	1,243 71
Oramel*	17,599	13,313	11,446	....	....	....	....
Caneadea	....	....	....	11,109	7,852	9,850	13,157 55
Olean	10,914	28,487	31,361	38,733	22,789	39,648	38,008 20
Boonville	11,065	9,215	12,114	13,606	12,675	15,926	19,714 88

STATEMENT No. 10—(*Continued*).

OFFICES.	1857.	1858.	1859.	1860.	1861.	1862.	1863.
Higgins†	$5,711	$5,194	$4,629	$3,519	$2,620	....	....
Baldwinsville†	....	....	....	....	....	....	....
	$2,045,641	$2,110,754	$1,723,945	$3,009,597	$3,908,785	$5,188,943	$4,645,207 11

---

* Office discontinued in 1860.

† Office discontinued in 1862.

‡ Office discontinued in 1857.

§ Office discontinued in 1858.

STATEMENT No. 10—(*Continued*).

OFFICES.	1864.	1865.	1866.	1867.	1868.	1869.
New York	$119,468 84	$150,591 16	$190,609 74	$159,853 65	$236,788 35	$173,684 59
Albany	53,147 57	44,116 69	62,782 46	75,502 31	85,070 93	45,698 76
West Troy	205,070 43	149,917 23	197,035 81	254,035 49	240,686 24	170,381 23
Schenectady	3,469 26	4,894 14	5,652 66	4,656 93	5,799 10	5,759 61
Fultonville	4,564 98	4,018 53	3,192 86	3,816 18	3,740 58	3,227 07
Little Falls	3,337 60	3,203 79	3,774 67	2,896 02	3,909 85	3,163 19
Utica	36,540 40	37,723 28	34,206 58	25,358 22	34,350 85	19,513 87
Rome	26,462 58	63,652 64	92,990 64	108,722 54	168,230 29	217,838 42
Syracuse	67,132 93	68,484 89	71,115 89	67,703 02	67,045 22	98,798 87
Jordan*	....	....	....	....	....	....
Montezuma	114,113 10	134,819 96	90,201 96	77,343 74	94,955 18	72,811 04
Lyons†	....	....	....	....	....	....
Palmyra	14,675 85	23,477 18	19,537 42	21,162 17	19,424 34	23,718 89
Rochester	100,448 13	104,897 98	70,735 67	61,606 41	53,847 94	60,356 29
Brockport	7,450 23	11,756 61	12,214 20	9,510 79	5,598 84	7,538 90
Albion	30,867 85	43,105 48	35,071 62	23,295 60	16,207 51	8,897 81
Medina†	....	....	....	....	....	70,717 18
Lockport	82,555 74	59,007 96	142,184 99	45,861 75	50,106 41	10,742 50
Tonawanda	88,671 16	94,303 34	68,810 59	81,312 85	65,518 19	92,138 49
Black Rock‡	....	....	....	....	....	....
Buffalo	2,162,907 57	1,935,223 76	2,272,055 69	2,055,726 72	2,040,007 82	1,644,642 16
Waterford	30,917 87	25,405 67	37,304 01	38,659 03	42,675 77	36,986 04
Schuylerville	....	....	....	....	....	....

STATEMENT No. 10 — (*Continued*).

OFFICES.	1864.	1865.	1866.	1867.	1868.	1869
Glens Falls§	....	....	....	....	....	....
Fort Edward	$32,550 36	$31,039 45	$31,526 80	$32,434 92	$39,299 34	$33,696 70
Whitehall	88,420 62	100,440 31	114,717 72	115,429 40	105,476 24	106,578 54
Salina	42,758 31	40,298 38	52,679 60	43,702 06	48,924 34	42,503 26
Phœnix	22,676 01	45,548 43	26,674 13	19,713 09	31,721 87	35,642 36
Oswego	415,856 88	477,446 56	552,520 12	560,712 71	563,394 28	563,799 51
Seneca Falls†	....	....	....	....	....	....
Geneva	66,620 77	82,369 31	85,005 13	75,669 63	101,021 45	103,762 16
Ithaca*	....	....	....	....	....	....
Havana‖	11,214 00	9,842 34	10,735 82	9,365 94	....	....
Watkins¶	....	....	....	....	11,762 11	31,266 06
Horseheads	19,366 15	12,528 25	36,274 96	13,156 55	9,109 97	10,706 79
Corning	47,778 35	22,536 28	22,539 74	25,328 89	17,078 71	13,533 96
Dresden§	....	....	....	....	....	....
Penn Yan	4,548 26	6,553 88	10,261 72	4,668 45	2,921 07	6,311 50
Hamilton	3,812 36	3,800 39	5,609 81	3,289 28	2,878 39	1,696 16
Oxford	1,921 87	1,685 63	1,535 34	1,839 16	1,536 10	1,383 95
Binghamton	14,294 01	10,191 01	16,623 98	17,378 07	18,588 02	12,920 77
Scottsville†	....	....	....	....	....	....
Mount Morris	5,960 48	3,918 44	3,542 65	3,268 54	4,960 44	2,888 43
Dansville	990 63	756 49	1,164 72	1,277 17	864 65	1,538 16
Oramel*	....	....	....	....	....	....
Caneadea	10,475 08	6,127 37	7,595 54	4,962 24	7,971 17	3,998 98

Olean	23,120 80	8,769 22	24,281 57	16,207 40	24,336 48	16,999 39
Booneville	19,814 80	17,502 77	23,870 49	22,631 02	13,460 57	11,816 94
Higgins†	....	....	....	....	....	....
Baldwinsville‡	....	....	....	....	....	....
Lyons Falls¶	....	....	....	....	7,294 95	10,842 65
	$3,983,981 83	$3,839,954 80	$4,436,637 30	$4,088,057 94	$4,246,563 56	$3,778,501 18

---

* Office discontinued in 1860.
§ Office discontinued in 1858.
† Office discontinued in 1862, and re-established in 1869.
‖ Office discontinued in 1868.
‡ Office discontinued in 1857.
¶ Office established in 1868.

STATEMENT No. 10 — (*Continued*).

OFFICES.	1870.	1871.	1872.	1873.	1874.	1875.
New York	$108,087 11	$170,413 77	$104,491 45	$119,830 68	$93,912 32	$60,977 13
Albany	38,094 81	28,370,77	38,101 09	32,783 49	36,481 50	23,043 46
West Troy	162,073 11	94,679 41	99,779 15	80,685 14	72,307 35	53,944 07
Schenectady	5,491 06	6,533 22	7,299 30	6,257 59	5,781 02	4,447 11
Fultonville	3,680 42	3,113 78	2,344 86	2,773 86	2,459 46	2,116 35
Little Falls	2,293 33	1,844 17	2,171 05	1,850 88	1,651 53	1,252 48
Utica	20,543 45	18,577 64	10,876 27	11,747 64	13,957 57	8,500 82
Rome	114,455 19	165,829 96	202,162 65	215,921 00	147,068 72	10,065 38
Syracuse	47,728 85	53,741 58	42,894 89	48,542 52	36,471 19	38,050 66
Jordan*	....	....	....	....	....	....
Montezuma	59,329,96	55,763 69	69,883 38	77,637 57	61,843 22	66,834,61
Lyons†	....	....	....	....	....	....
Palmyra	26,753 57	23,638 88	19,152 06	21,683 23	18,537 41	14,098 43
Rochester	34,952 90	21,844 08	18,486 74	21,304 12	16,286 26	6,932 04
Brockport	5,808 47	12,128 28	5,342 27	5,299 72	7,141 27	7,129 33
Albion	8,112 92	7,164 56	4,283 86	39,010 32	19,584 95	6,254 03
Medina†	56,387 65	183,374 33	147,091 99	153,502 39	102,631 66	27,804 60
Lockport	7,146 15	14,856 04	7,758 39	16,435 29	8,114 01	5,384 56
Tonawanda	89,216 91	104,201 35	100,540 12	142,185 58	215,668 36	130,838 31
Black Rock ‡	....	....	....	....	....	....
Buffalo	1,060,055 03	1,389,910 41	1,416,049,31	1,415,634 33	1,196,780 57	789,860 24
Waterford	27,171 67	26,443 19	33,177 41	29,896 37	30,499 55	25,434 81
Schuylerville	....	....	....	....	....	....
Glens Falls §	....	....	....	....	....	....
Fort Edward	24,653 06	27,605 18	33,743 18	22,997 73	30,773 43	19,128 63

Whitehall	91,923 47	85,764 83	97,106 91	72,520,12	63,492 44	44,161 89
Salina	26,191 05	32,417 07	37,912 16	30,533 38	29,271 07	33,350 92
Phœnix	33,174 46	34,954 22	12,103 59	6,875 09	10,936 39	4,751 17
Oswego	391,166 60	402,210 06	338,155 08	264,166 44	289,787 37	130,779 67
Seneca Falls†	....	....	....	....	....	....
Geneva	61,485 87	49,096 10	46,044 16	49,158 45	42,088 61	23,291 79
Ithaca*	....	....	....	....	....	....
Havana‖	....	....	....	....	....	....
Watkins¶	25,627 05	23,487 10	22,737 26	30,236 94	33,298 83	25,353 21
Horseheads	1,830 58	1,569 12	1,144 49	737 16	375 87	....
Corning	8,738 06	7,108 40	6,961 02	5,122 79	3,668 55	1,963 92
Dresden§	....	....	....	....	....	....
Penn Yan	3,111 25	4,488 64	1,842 82	2,091 29	953 31	....
Hamilton	1,545 47	886 37	799 10	890 35	555 57	....
Oxford	990 83	350 05	450 53	1,378 05	1,092 33	....
Binghamton	9,759 93	3,530 20	1,499 15	1,506 43	1,736 10	1,262 33
Scottsville†	....	....	....	....	....	....
Mount Morris	2,971 13	2,013 93	3,449 37	3,739 51	3,331 84	2,617 38
Dansville††	380 88	343 05	295 05	287 90	....	....
Oramel*	....	....	....	....	....	....
Caneadea	2,728 77	2,852 53	3,295 42	3,451 80	1,531 93	....
Olean	21,864 27	17,223 69	15,889 72	14,539 56	9,301 52	7,500 03
Boonville	12,503 65	8,150 81	10,441 33	8,128 00	27,697 84	12,932 89
Higgins**	....	....	....	....	....	....
Baldwinsville‡	....	....	....	....	....	....
Lyons Falls¶ ††	13,548 74	14,268 36	16,655 14	15,376 76	....	....
	$2,611,577 68	$3,100,838 82	$3,072,411 72	$2,976,718 54	$2,637,070 92	$1,590,032 25

STATEMENT No. 10 — (*Continued*).

OFFICES.	1876.	1877.	1878.	1879.	1880.	1881.	1882.
New York	$42,146 00	$53,558 58	$35,378 57	$42,093 00	$53,516 47	....	....
Albany	25,435 07	8,699 17	8,326 75	6,999 00	8,183 77	$6,077 30	$4,918 12
West Troy	47,373 92	32,396 82	34,531 07	22,849 00	28,471 22	3,709 39	3,950 64
Schenectady §§§§	4,073 29	....	....	....	....	....	....
Fultonville §§§§ ..	1,967 83	....	....	....	....	....	....
Little Falls §§§§ .	1,306 46	....	....	....	....	....	....
Utica	7,786 57	4,306 63	4,760 48	3,593 00	3,530 34	3,218 64	3,663 06
Rome	6,710 51	4,839 23	3,454 49	2,990 00	3,387 51	....	....
Syracuse	26,524 24	24,938 33	24,158 74	19,540 00	20,858 07	9,479 17	9,547 20
Jordan *	....	....	....	....	....	....	....
Montezuma	45,943 49	19,513 56	28,003 10	15,731 00	14,416 94	....	....
Lyons **	....	....	....	....	....	....	....
Palmyra	9,716 33	....	....	....	3,715 30	....	....
Rochester	10,066 58	12,423 85	10,761 16	9,643 00	11,797 82	7,360 60	5,281 97
Brockport §§§§ ..	6,909 48	....	....	....	....	....	....
Albion §§§§	5,952 54	....	....	....	....	....	....
Medina ** §§§§ ...	30,740 93	....	....	....	....	....	....
Lockport §§§§ ...	7,106 86	....	....	....	....	....	....
Tonawanda	180,119 58	102,560 49	93,015 01	116,629 00	136,378 63	164,737 24	169,575 16
Black Rock ‡ ...	....	....	....	....	....	....	....
Buffalo	583,644 42	467,921 74	628,435 45	591,642 00	736,626 10	326,158 14	330,707 01
Waterford	17,827 54	9,302 18	7,955 37	5,426 00	7,010 91	10,987 90	13,360 04
Schuylerville	....	....	....	....	....	....	....
Glens Falls §	....	....	....	....	....	....	....
Fort Edward	17,078 88	11,869 85	11,905 40	7,853 00	9,016 52	....	....

Whitehall	39,386 47	22,351 71	22,514 30	23,265 00	30,085 21	23,690 29	24,336 25
Salina §§§§	21,849 34	....	....	....	....	....	....
Phœnix	....	....	....	....	....	....	....
Oswego	102,624 59	55,544 31	42,388 45	50,834 00	62,777 05	54,787 10	65,916 01
Seneca Falls†	....	....	....	....	....	....	....
Geneva	19,304 17	15,771 07	13,273 14	4,668 00	4,662 43	3,046 90	4,219 00
Ithaca*	....	....	....	....	....	....	....
Havana ‖	....	....	....	....	....	....	....
Watkins §§§§	29,702 55	....	....	....	....	....	....
Horseheads‡‡	....	....	....	....	....	....	....
Corning	3,576 58	2,869 74	1,978 63	....	....	....	....
Dresden §	....	....	....	....	....	....	....
Penn Yan ‡‡	....	....	....	....	....	....	....
Hamilton ‡‡	....	....	....	....	....	....	....
Oxford §§§§	1,651 48	....	....	....	....	....	....
Binghamton §§§	....	....	....	....	....	....	....
Scottsville †	....	....	....	....	....	....	....
Mount Morris	5,471 75	2,814 44	1,680 45	....	....	....	....
Dansville ††	....	....	....	....	....	....	....
Oramel *	....	....	....	....	....	....	....
Caneadea ‡‡	....	....	....	....	....	....	....
Olean	14,663 72	9,044 87	4,119 18	....	....	....	....
Boonville	23,342 13	20,078 63	16,708 64	17,811 00	20,984 30	19,137 21	20,351 54
Higgins **	....	....	....	....	....	....	....
Baldwinsville ‡	....	....	....	....	....	....	....
Lyons Falls††	....	....	....	....	....	....	....
	$1,340,003 30	$880,895 20	$993,348 38	$941,574 00	$1,155,418 59	$632,389 97	$655,826 00

---

* Discontinued in 1860.
** Discontinued in 1862.
†† Discontinued in 1874.
‡‡ Discontinued in 1875, and re-established in 1876.
§§ Discontinued in 1875, and re-established in 1876.
§§§ Discontinued in 1876.
§§§§ Discontinued in 1877.

(No. 11.)

STATEMENT of the tons and value of each article transported on the canals for different years, from 1866 *to* 1882.

ARTICLES.	1866.		1867.	
	Tons.	Value.	Tons.	Value.
THE FOREST.				
Fur and peltry	418	$1,673,200	283	$1,130,100
Product of wood.				
Boards and scantling	1,203,469	18,336,602	1,310,006	19,442,507
Shingles	20,441	842,333	14,538	589,305
Timber	160,778	2,051,786	110,742	2,003,820
Staves	152,374	5,329,151	160,847	5,448,484
Wood	231,884	421,279	135,387	247,499
Ashes, pot and pearl	630	100,470	12,449	115,055
Total of the forest	1,769,994	$28,754,821	1,744,252	$28,977,470
AGRICULTURE.				
Product of animals.				
Pork	1,776	$321,404	910	$130,689
Beef	391	54,907	274	27,766
Bacon	33	9,166	46	12,738
Cheese	7,734	2,465,835	6,700	1,962,237
Butter	590	450,947	747	511,765
Lard, tallow, and lard oil	149	54,628	877	259,423
Wool	1,476	1,506,658	931	837,908

Hides	6,661	2,514,251	6,129	1,932,676
Total product of animals	18,810	$7,377,796	16,614	$5,675,202
Vegetable food.				
Flour	81,202	$8,673,350	61,947	$7,419,482
Wheat	329,694	22,521,061	408,909	28,723,900
Rye	49,054	1,722,019	29,250	1,547,091
Corn	809,316	26,326,456	502,054	18,623,545
Corn meal	1,941	84,673	1,383	65,378
Barley	188,809	8,655,789	119,334	6,304,236
Barley malt	9,841	786,559	7,917	603,664
Oats	194,212	5,827,930	167,616	7,318,666
Bran and ship stuffs	24,381	769,665	12,633	348,331
Peas and beans	16,100	642,215	24,814	1,146,597
Apples	17,428	229,175	42,499	1,551,700
Potatoes	41,827	868,867	37,862	983,436
Dried fruit	126	47,237	119	35,473
Total vegetable food	1,763,931	$77,854,997	1,415,887	$74,671,499
All other agricultural products.				
Cotton	1,030	$701,726	782	$467,322
Unmanufactured tobacco	505	213,152	522	249,484
Hemp	60	11,385	26	4,867
Clover and grass seed	405	63,544	595	73,995
Flax seed	924	79 721	3,953	369,234

STATEMENT No. 11—(*Continued*).

ARTICLES.	1866.		1867.	
	Tons.	Value.	Tons.	Value.
Hops	395	$308,613	138	$105,060
Total all other agricultural products	3,319	$1,378,141	6,016	$1,269,962
Total agricultural products	1,786,060	$86,610,934	1,438,517	$81,616,663
MANUFACTURES.				
Domestic spirits	930	$518,364	377	$249,923
Oil meal and cake	2,095	127,504	2,469	147,532
Leather	5,115	5,213,437	5,603	4,518,552
Furniture	2,995	1,423,713	2,453	998,204
Bar and pig lead	262	81,541	499	96,390
Pig iron	51,084	2,935,175	46,490	2,389,622
Bloom and bar iron	11,618	1,179,965	10,528	871,249
Castings and iron ware	15,829	2,595,019	16,335	2,520,292
Domestic woolens	174	93,946	155	393,400
Domestic cottons	302	567,138	336	635,419
Domestic salt	207,166	3,420,895	329,640	3,759,253
Foreign salt	4,671	233,295	5,959	297,498
Total manufactures	302,241	$18,389,992	320,844	$16,877,334
MERCHANDISE	179,878	$100,169,211	219,880	$108,545,569

OTHER ARTICLES.				
Live cattle, hogs and sheep	46	$8,662	96	$19,109
Stone, lime and clay	235,101	4,340,311	244,830	4,983,831
Gypsum	59,724	594,815	42,460	498,540
Mineral coal	....	....	....	....
Anthracite coal	690,612	5,260,091	773,120	5,665,218
Bituminous coal	446,001	2,804,790	509,474	3,155,822
Copper ore	2,073	1,035,317	2,380	1,191,568
Iron ore	183,937	1,695,352	191,439	1,887,686
Sundries	119,553	21,299,420	201,033	25,537,902
Total other articles	1,737,047	$37,038,718	1,964,832	$42,939,676
Total	5,775,220	$270,963,676	5,688,325	$278,956,712

STATEMENT No. 11 —(*Continued*).

ARTICLES.	1868.		1869.	
	Tons.	Value.	Tons.	Value.
THE FOREST.				
Fur and peltry	11	$18,902	11	$11,420
Product of Wood.				
Boards and scantling	1,467,040	18,151,144	1,504,750	18,247,591
Shingles	17,076	606,289	15,802	422,679
Timber	86,688	853,734	116,027	1,190,879
Staves	218,842	2,186,765	101,027	1,043,606
Wood	152,769	269,852	90,995	162,804
Ashes, pot and pearl	15,883	1,952,905	27,318	851,676
Total of the forest	1,958,309	$34,930,591	1,855,930	$21,930,655
AGRICULTURE.				
Product of animals.				
Pork	818	$129,259	532	$103,782
Beef	351	36,361	24	2,275
Bacon	....	....	....	....
Cheese	7,676	1,458,405	4,023	1,319,209
Butter	971	548,506	555	444,169
Lard, tallow and lard oil	607	194,504	120	42,030
Wool	1,124	906,041	1,087	861,724
Hides	6,259	2,054,980	2,350	728,796
Total product of animals	18,076	$5,326,056	8,691	$3,501,985

Vegetable food.				
Flour	62,197	$6,028,028	72,051	$4,875,398
Wheat	432,767	25,641,931	670,534	26,823.950
Rye	24,454	1,228,599	13,489	547,793
Corn	516,239	18,624,485	256,875	8,355,257
Corn meal	1,605	118,491	1,368	68,700
Barley	88,754	5,262,179	99,012	4,319,498
Barley malt	4,488	1,467,838	5,782	411,700
Oats	190,836	8,316,411	92,309	2,969,554
Bran and ship stuffs	16,181	396,819	17,088	380,232
Peas and beans	11,750	562,476	11,377	764,682
Apples	31,523	1,394,847	38,266	1,458,147
Potatoes	31,293	655,869	25,949	410,710
Dried fruit	88	30,552	113	30,619
Total vegetable food	1,419,175	$69,728,525	1,302,613	$51,416,240
All other agricultural products.				
Cotton	703	$387,486	376	$208,147
Unmanufactured tobacco	218	56,702	251	115,244
Hemp	2	342	34	2,360
Clover and grass seed	462	533,589	92	17,680
Flax seed	3,419	311,757	1,680	137,501
Hops	92	39,199	334	129,668
Total all other agricultural products	4,896	$1,329,075	2,767	$610,600
Total agricultural products	1,442,147	$76,383,656	1,314,071	$55,528,825

STATEMENT No. 11 — (*Continued*).

ARTICLES.	1868.		1869.	
	Tons.	Value.	Tons.	Value.
MANUFACTURES.				
Domestic spirits	338	$11,270	1,682	$466,298
Oil meal and cake	2,122	122,569	2,046	104,421
Leather	5,385	4,138,822	2,488	1,727,218
Furniture	2,952	1,318,290	2,124	853,546
Bar and pig lead	112	16,861	76	13,553
Pig iron	59,434	2,462,000	41,984	1,702,690
Bloom and bar iron	7,657	492,556	14,034	781,806
Castings and iron ware	20,207	2,446,607	14,198	2,062,510
Domestic woolens	142	828,055	252	1,051,996
Domestic cottons	459	874,378	792	435,419
Domestic salt	266,760	4,239,198	258,927	4,275,579
Foreign salt	7,694	247,368	3,726	120,856
Total manufactures	373,262	$17,298,574	342,239	$13,595,892
Merchandise	324,064	$131,786,764	268,970	$103,464.505
OTHER ARTICLES.				
Live cattle, hogs and sheep	26	$4,769	31	$6,458
Stone, lime and clay	237,280	4,275,046	301,590	4,688,210
Gypsum	56,947	449,367	61,331	366,132
Mineral coal	....	....	....	....

Anthracite coal	1,057,388	6,301,279	656,104	4,303,463
Bituminous coal	554,301	3,703,866	668,304	3,585,962
Copper ore	425	170,249	277	27,780
Iron ore	210,375	972,729	183,992	1,223,340
Sundries	227,701	39,916,039	206,241	40,560,062
Total other articles	2,344,443	$55,793,344	2,077,870	$54,761,407
Total	6,442,225	$305,301,929	5,859,080	$249,218,284

STATEMENT No. 11 — (*Continued*).

ARTICLES.	1870.		1871.	
	Tons.	Value.	Tons.	Value.
THE FOREST.				
Fur and peltry	1	$428	....	....
Product of wood.				
Boards and scantling	1,559,946	18,611,765	1,483,678	$18,876,851
Shingles	17,626	423,135	197,953	488,019
Timber	85,406	1,161,924	69,526	579,602
Staves	145,758	1,734,290	97,598	711,527
Wood	98,150	172,899	81,860	121,838
Ashes, pot and pearl	9,624	161,743	10,682	127,719
Total of the forest	1,916,511	$22,266,184	1,941,297	$20,905,556
AGRICULTURE. *Product of animals.*				
Pork	170	$26,191	657	$60,274
Beef	212	21,168	204	15,312
Bacon	....	....	....	....
Cheese	5,216	1,481,792	3,197	779,340
Butter	379	241,981	102	57,144
Lard, tallow and lard oil	42	9,421	211	42,403

Wool	1,114	976,711	1,134	1,165,053
Hides	3,572	1,127,411	3,138	930,418
Total product of animals	10,705	$3,884,675	8,643	$3,049,944
Vegetable food.				
Flour	54,978	$3,387,313	41,211	$2,724,892
Wheat	658,524	23,636,402	748,549	33,958,245
Rye	19,520	615,984	34,563	1,130,294
Corn	193,129	4,924,314	672,057	14,643,436
Corn meal	1,323	58,791	714	28,183
Barley	128,191	4,846,008	113,992	4,931,930
Barley malt	13,977	922,703	14,024	919,573
Oats	117,941	3,857,748	129,891	3,280,704
Bran and ship stuffs	14,007	295,372	10,739	241,831
Peas and beans	6,784	277,447	4,881	200,381
Apples	67,241	1,415,597	39,845	1,560,342
Potatoes	24,303	543,123	39,534	724,799
Dried fruit	90	11,290	198	50,364
Total vegetable food	1,295,010	$44,796,092	1,850,198	$64,394,974
All other agricultural products.				
Cotton	706	$249,781	633	$234,728
Unmanufactured tobacco	170	60,328	151	35,482
Hemp	22	9,301	5	2,953
Clover and grass seed	6	1,873	30	5,794

STATEMENT No. 11—(*Continued*).

ARTICLES.	1870.		1871.	
	Tons.	Value.	Tons.	Value.
Flax seed	2,458	$212,663	4,115	$341,795
Hops	76	21,199	93	64,612
Total all other agricultural products	3,438	$555,145	5,027	$685,364
Total agricultural products	1,309,153	$49,231,912	1,863,868	$68,130,282
MANUFACTURES.				
Domestic spirits	573	$119,356	423	$85,154
Oil meal and cake	1,557	87,489	1,944	81,591
Leather	1,903	1,171,095	1,094	659,797
Furniture	1,342	576,049	1,248	441,816
Bar and pig lead	505	95,102	480	96,071
Pig iron	45,089	1,482,802	57,209	2,104,431
Bloom and bar iron	13,778	628,028	15,546	979,998
Castings and ironware	10,436	1,281,556	8,256	1,037,828
Domestic woolens	229	878,763	610	617,204
Domestic cottons	345	283,635	769	672,744

Domestic salt	263,437	4,065,997	246,220	4,026,082
Foreign salt	3,303	108,025	2,489	78,824
Total manufactures	342,497	$10,777,897	336,288	$10,881,540
Merchandise	271,856	$94,852,914	288,428	$78,898,185
OTHER ARTICLES.				
Live cattle, hogs and sheep	13	$31,900	8	$848
Stone, lime and clay	315,356	4,251,316	343,254	4,320,253
Gypsum	34,398	159,969	36,334	518,141
Anthracite coal	896,260	5,102,999	602,044	3,736,263
Bituminous	661,925	1,186,131	591,993	843,924
Copper ore	....	....	123	49,320
Iron ore	238,802	1,533,691	289,952	1,867,473
Sundries	186,998	40,441,263	174,299	42,212,159
Total other articles	2,333,752	$54,707,269	2,038,007	$53,548,381
Total	6,173,769	$231,836,176	6,467,888	$238,767,691

STATEMENT No. 11—(*Continued*)

ARTICLES.	1872.		1873.		1874.	
	Tons.	Value.	Tons.	Value.	Tons.	Value.
THE FOREST.						
Fur and peltry	3	$13,200	28	$113,600	....	....
Product of wood.						
Boards and scantling	1,671,721	23,262,789	1,300,599	16,027,433	1,217,245	$14,889,481
Shingles	11,848	383,868	7,215	231,404	10,486	301,058
Timber	69,585	778,708	72,261	900,962	82,537	902,244
Staves	114,574	1,113,625	111,888	1,210,304	97,219	1,480,967
Wood	81,796	108,274	89,392	129,702	74,441	102,050
Ashes, pot and pearl	1,271	22,270	689	38,433	825	164,556
Total of the forest	1,950,798	$25,682,734	1,582,072	$18,651,838	1,482,753	$17,840,356
AGRICULTURE.						
Product of animals.						
Pork	985	$146,416	147	$13,057	151	$18,277
Beef	1,632	306,940	....	....	3	520
Bacon	11	1,798	8	1,420	....	....
Cheese	1,547	234,608	1,426	360,264	1,631	471,948
Butter	27	14,846	10	11,597	21	11,669
Lard, tallow and lard oil	52	6,935	21	84,601	78	20,308

Wool	471	551,618	710	585,869	440	408,233
Hides	1,014	172,229	491	88,452	234	50,157
Total product of animals	5,739	$1,594,720	2,813	$1,145,260	2,558	$981,112
Vegetable food.						
Flour	20,534	$1,451,675	19,307	$1,388,207	29,134	$1,768,692
Wheat	403,903	18,617,867	803,064	34,538,743	772,163	32,172,276
Rye	13,357	359,747	30,160	855,521	8,215	265,796
Corn	902,753	16,251,503	637,296	11,425,250	519,203	14,099,305
Corn meal	653	17,991	1,009	13,002	898	33,459
Barley	120,061	4,769,101	70,586	4,229,388	98,654	5,920,162
Barley malt	27,631	1,416,639	17,737	1,452,743	6,798	717,276
Oats	92,959	2,106,639	70,023	1,658,709	59,408	1,982,477
Bran and ship stuffs	11,331	236,880	9,267	161,197	4,188	84,744
Peas and beans	4,398	122,441	11,799	230,479	6,017	159,142
Apples	33,694	850,459	34,176	1,469,053	50,724	1,194,358
Potatoes	42,936	935,869	40,680	910,197	212,194	4,659,685
Dried fruit	110	24,213	67	10,544	2	244
Total vegetable food	1,674,320	$47,161,024	1,745,171	$58,343,033	1,767,598	$63,057,616
All other agricultural products.						
Cotton	778	$460,247	1,172	$583,723	435	$131,220
Unmanufactured tobacco	130	91,677	66	31,322	16	5,003
Hemp	55	10,935	72	18,097	49	9,893
Clover and grass seed	....	....	15	2,688	57	8,339

STATEMENT No. 11 — (*Continued*).

ARTICLES.	1872.		1873.		1874.	
	Tons.	Value.	Tons.	Value.	Tons.	Value.
Flax seed	2,916	$205,312	1,103	$66,271	1,682	$128,232
Hops	24	17,344	6	4,515	188	23,483
Total all other agricultural products,	3,903	$785,515	2,434	$706,616	2,427	$306,170
Total agricultural products	1,683,962	$49,541,259	1,750,418	$60,194,909	1,772,583	$64,344,898
MANUFACTURES.						
Domestic spirits	257	$90,333	275	$66,821	167	$28,612
Oil meal and cake	2,021	95,266	2,220	102,083	2,459	123,158
Leather	437	290,087	182	101,641	213	121,124
Furniture	595	144,957	528	124,353	415	126,083
Bar and pig lead	190	29,341	120	18,904	173	27,764
Pig iron	55,123	2,315,114	26,904	1,051,032	40,392	1,494,772
Bloom and bar iron	11,165	895,143	12,115	972,392	22,835	1,921,241
Castings and iron ware	7,133	1,041,205	8,705	1,337,172	6,034	823,050
Domestic woolens	20	86,317	30	39,281	57	285,875
Domestic cottons	65	42,932	35	20,700	362	291,172

Domestic salt	244,222	2,540,485	212,730	2,064,844	167,801	1,752,012
Foreign salt	4,336	88,667	3,976	80,433	5,789	99,668
Total manufactures	325,564	$7,659,547	267,820	$5,979,656	246,697	$7,094,531
Merchandise	298,758	$93,997,415	172,990	$76,173,336	132,181	$64,477,540
OTHER ARTICLES.						
Live cattle, hogs and sheep	2	$110	2	$310	1	133
Stone, lime and clay	398,188	3,502,057	415,304	3,448,546	367,009	2,814,799
Gypsum	40,535	181,006	52,513	224,286	21,289	98,918
Anthracite coal	936,793	5,335,787	967,593	6,070,617	840,820	4,971,195
Bituminous coal	525,797	3,007,453	658,266	2,685,622	572,342	2,632,604
Copper ore	....	....	....	....	....	....
Iron ore	377,592	2,366,642	415,968	3,193,085	232,544	1,998,202
Sundries	135,381	19,722,311	81,836	15,093,295	136,369	30,401,146
Total other articles	2,414,288	$34,115,366	2,591,482	$30,715,761	2,170,374	$42,916,997
Total	6,673,370	$220,913,321	6,364,782	$191,715,500	5,804,588	$196,674,322

STATEMENT No. 11 – (*Continued*).

ARTICLES.	1875.		1876.		1877.	
	Tons.	Value.	Tons.	Value.	Tons.	Value.
THE FOREST.						
*Fur and peltry	....	....	....	....	72	$164,317
Product of wood.						
Boards and scantling	1,055,107	$10,983,367	1,011,925	$10,076,145	1,130,502	13,112,242
Timber	8,956	236,144	6,969	173,510	9,775	229,036
Shingles	54,351	518,393	31,193	343,882	31,998	382,430
Staves	50,389	628,866	37,356	419,169	48,183	565,539
Wood	78,541	104,084	84,613	115,384	88,019	114,855
Ashes, pot and pearl	3,202	7,815	3,257	4,876	3,977	6,474
*Ashes, leached	....	....	....	....	....	....
Total of the forest	1,250,546	$12,478,669	1,175,313	$11,132,966	1,312,454	$14,410,576
AGRICULTURE.						
Product of animals.						
*Pork	130	$20,922	104	$12,632	6,018	$545,995
*Beef	....	....	....	....	17	1,120
*Bacon	....	....	....	....	1	210
Cheese	1,281	334,442	610	152,112	107	25,870
Butter	23	13,211	128	76,308	9	4,306

*Lard, tallow and lard oil	30	7,446	76	17,163	5,089	872;337
*Wool	131	102,162	261	202,456	363	286,447
Hides	658	69,759	717	79,257	834	122,110
Total product of animals	2,253	$547,942	1,896	$539,928	12,438	$1,857,495
Vegetable food.						
Flour	17,635	$1,085,163	9,290	$582,515	8,923	$657,762
Wheat	744,293	31,203,607	416,376	15,763,545	448,043	20,501,777
Rye	8,309	240,139	19,949	533,295	35,948	863,799
Corn	282,031	7,030,306	365,254	6,754,802	723,458	13,201,461
*Corn meal	324	11,883	25	761	337	10,624
Barley	104,475	4,288,575	96,494	3,910,333	139,453	4,551,753
Barley malt	12,475	1,173,451	26,436	1,397,364	12,579	974,302
Oats	62,717	1,913,154	52,147	1,153,808	66,045	1,284,415
Bran and ship stuffs	3,645	73,853	5,632	151,744	2,391	45,401
Peas and beans	5,856	354,804	5,226	190,771	4,876	140,072
Apples	35,574	1,124,107	33,355	405,127	9,804	357,779
Potatoes	28,181	688,257	34,018	885,952	47,464	688,823
*Dried fruit	35	7,136	91	9,403	3,223	962,482
Total vegetable food	1,305,550	$49,194,435	1,064,293	$31,739,420	1,502,541	$44,240,450
All other agricultural products.						
*Cotton	536	$85,765	524	$99,870	905	$187,375
*Unmanufactured tobacco	89	38,955	40	9,474	90	31,504
*Hemp	53	15,938	20	2,353	642	103,600
*Clover and grass seed	......	....	29	2,219	2,219	136,309

STATEMENT No. 11 — (*Continued*).

ARTICLES.	1875.		1876.		1877.	
	Tons.	Value.	Tons.	Value.	Tons.	Value.
Flax seed	3,299	$639,918	694	$46,077	3,410	$197,700
*Hops	33	17,958	1	516	69	11,202
Total all other agricultural products	3,810	$798,534	1,308	$160,509	7,335	$667,690
Total agricultural products	1,311,613	$50,540,911	1,067,497	$32,439,857	1,522,317	$46,765,635
MANUFACTURES.						
*Domestic spirits	282	$53,443	179	$33,765	258	$79,727
Oil meal and cake	2,973	169,328	2,704	118,709	4,763	225,073
*Leather	6	3,964	108	61,469	85	42,440
Furniture	456	149,306	320	110,253	374	125,934
*Bar and pig lead	23	4,113	34	4,872	1,361	136,904
Pig iron	59,158	1,505,283	44,672	1,133,788	35,992	795,249
Bloom and bar iron	19,936	1,436,183	16,505	765,233	11,044	493,790
Castings and iron ware	5,804	784,779	1,606	260,539	3,603	544,186
*Domestic woolens	32	123,000	2	6,334	2,532	5,672,312
*Domestic cottons	276	166,602	1	225	3,519	1,100,320

Domestic salt	184,252	1,877,247	110,965	832,336	116,340	1,206,063
Foreign salt	2,533	37,289	3,105	47,596	5,347	489,738
Total manufactures	275,731	$6,311,137	180,201	$3,375,119	184,218	$10,911,736
MERCHANDISE	110,141	$40,885,448	64,943	$31,069,375	83,010	$46,130,796
OTHER ARTICLES.						
*Live cattle, hogs and sheep	....	....	3	$444	2	$170
Stone, lime and clay	275,519	$2,334,975	200,938	1,961,280	160,283	1,441,475
Gypsum	15,503	71,166	16,776	75,719	25,356	46,769
Anthracite coal	1,013,329	5,408,808	759,374	3,733,056	1,015,239	3,303,135
Bituminous coal	203,762	1,419,181	277,324	1,102,722	257,642	997,985
Copper ore	1	360	....	....	....	....
Iron ore	283,218	1,249,715	173,530	834,856	250,573	1,129,375
Petroleum	....	....	....	....	....	....
Sundries	120,495	24,308,205	256,230	27,364,985	144,797	14,109,994
Total other articles	1,911,827	$34,792,410	1,684,175	$35,073,062	1,853,892	$21,028,903
Total	4,859,858	$145,008,575	4,172,129	$113,090,379	4,955,963	$139,411,963

* Articles marked thus were put on free list in 1877.

STATEMENT No. 11 — (*Continued*).

ARTICLES.	1878.		1879.		1880.		1881.	
	Tons.	Value.	Tons.	Value.	Tons.	Value.	Tons.	Value.
THE FOREST.								
*Fur and peltry	4	$15,600	....	....	....	....	....	....
Product of Wood.								
Boards and scantling	1,180,167	11,528,806	1,192,656	$10,781,310	1,372,948	$12,969,550	1,479,187	$16,805,741
Shingles	9,373	206,132	10,947	236,244	6,569	152,203	5,954	158,223
Timber	32,988	276,600	49,461	477,419	59,928	489,108	55,413	562,200
Staves	46,240	533,884	31,684	449,738	35,919	626,833	36,996	697,593
†Staves	....	....	....	....	243	1,456	....	....
Wood	84,256	76,726	72,888	74,278	81,336	77,416	62,434	106,424
Ashes, pot and pearl	583	20,566	104	9,306	14	488	448	47,212
*Ashes, leached	10,509	44,760	11,109	25,201	9,807	34,568	12,111	22,539
Total of the forest	1,364,120	$12,703,074	1,368,849	$12,053,499	1,566,764	$14,351,622	1,652,543	$18,399,932
AGRICULTURE.								
Product of Animals.								
*Pork	2,805	$190,558	648	$49,781	6,235	$589,610	195	$22,859
*Beef	....	....	....	....	45	3,080	....	12
*Bacon	1	46	....	31	1	123	....	....
*Cheese	398	70,982	109	24,372	15	3,520	48	9,655
*Butter	13	4,903	7	3,686	....	....	....	....

*Lard, tallow and lard oil	306	43,133	113	19,044	4,709	756,891	3,310	794,271
*Wool	514	376,246	512	532,663	398	334,194	45	32,040
Hides	745	114,141	252	31,423	210	32,700	23	2,983
Total product of animals	4,782	$800,009	1,641	$661,000	11,613	$1,720,118	3,621	$861,820
Vegetable Food.								
*Flour	3,254	$174,977	7,164	$661,000	8,226	$503,672	6,926	$475,469
Flour	2,650	148,827	....	472,820	....	....	....	....
Wheat	844,555	29,687,688	949,466	36,122,730	966,052	37,515,167	444,832	19,997,936
Rye	64,613	1,351,369	59,210	1,476,477	26,340	847,252	15,484	552,142
Corn	734,993	10,525,986	621,180	9,615,651	1,156,619	18,653,984	475,823	10,230,279
*Corn meal	612	15,926	878	22,303	1,363	40,402	1,444	30,199
Barley	89,534	3,934,228	96,144	3,452,307	106,247	4,120,816	81,587	3,606,054
Barley malt	16,496	1, 36,119	9,906	611,651	13,954	871,923	15,088	1,082,493
Oats	85,029	1,560,799	23,164	509,281	20,893	489,379	30,321	852,665
Bran and ship stuffs	2,764	32,695	2,908	42,351	1,906	38,344	3,350	66,233
Peas and beans	5,013	120,823	3,734	123,424	4,481	150,564	3,040	165,001
Apples	24,025	332,930	15,994	443,250	21,797	303,163	3,455	126,205
Potatoes	34,832	877,942	34,490	418,494	38,440	513,755	33,506	851,182
*Dried fruit	5,364	868,573	9,161	1,829,260	4,732	1,405,624	1,705	658,786
Total vegetable food	1,912,734	$50,968,882	1,833,399	$55,139,999	2,371,090	$65,454,048	1,116,561	$38,694,642
All other Agricultural Products.								
*Cotton	835	$134,164	836	$183,844	535	$117,899	43	$10,332
*Unmanufactured tobacco	178	53,160	209	76,243	142	53,186	96	39,080
*Hemp	1,516	218,834	779	128,506	595	118,950	5,154	1,030,860
*Clover and grass seed	588	41,392	74	19,644	1,313	133,169	459	73,491
*Flax seed	553	33,426	13,389	602,103	23,026	1,381,548	45,463	2,728,402
*Hops	50	11,946	20	15,314	44	15,300	3	1,716
Total all other agric'l products	3,720	$492,922	15,307	$1,025,654	25,655	$1,820,051	51,218	$3,883,881
Total agricultural products	1,921,236	$52,261,813	1,850,347	$56,826,653	2,408,358	$68,994,218	1,171,400	$43,440,343

STATEMENT No. 11 — (*Continued*).

ARTICLES.	1878.		1879.		1880.		1881.	
	Tons.	Value.	Tons.	Value.	Tons.	Value.	Tons.	Value.
MANUFACTURES.								
*Domestic spirits	406	$118,920	292	$87,017	356	$111,481	369	$153,495
*Oil meal and cake	6,586	263,437	4,356	254,017	1,508	90,479	2,111	126,660
*Leather	171	74,047	192	94,361	65	35,717	....	101
Furniture	369	172,655	355	153,584	222	72,240	47	13,516
*Bar and pig lead	98	8,633	264	25,604	56	5,845	6	595
Pig iron	45,040	745,818	62,090	1,554,691	105,323	2,634,289	47,099	1,069,991
Bloom and bar iron	6,665	175,281	27,003	1,378,232	11,948	592,891	74,484	3,724,269
Castings and iron ware	3,121	414,731	932	99,132	4,988	863,072	1,263	213,306
*Domestic woolens	5,641	10,134,528	10,804	25,899,931	2,123	5,050,442	2,004	1,772,489
*Domestic cottons	12,039	4,810,731	12,994	6,461,693	7,038	3,512,825	9,822	3,930,615
Domestic salt	133,148	807,507	132,794	1,096,227	139,062	1,144,596	101,271	669,933
Foreign salt	6,779	108,464	3,227	68,733	5,425	122,350	12,485	188,051
Total manufactures	220,063	$17,834,755	255,303	$37,173,222	278,114	$14,236,227	250,961	$11,863,021
MERCHANDISE	138,064	$70,433,563	237,071	$144,653,590	355,165	$109,870,264	325,775	$75,331,308

OTHER ARTICLES.								
†Rock and superphosphates	....	....	....	....	10,040	$320,438	10,693	$224,573
*Live cattle, hogs and sheep	....	....	....	$40	....	....	56	4,456
Stone, lime and clay	206,330	$934,148	197,896	571,258	235,514	1,935,040	268,503	2,099,808
Gypsum	13,351	47,637	9,462	48,314	12,525	85,634	5,248	12,756
Anthracite coal	681,737	2,279,608	810,533	2,324,348	757,695	7,307,426	888,256	3,942,271
Bituminous coal	208,136	846,782	160,541	617,392	201,647	845,617	203,747	730,370
Copper ore	....	....	....	....	....	....	....	....
Iron ore	210,078	898,480	314,411	1,570,024	370,884	1,877,479	337,873	1,698,883
Petroleum	27,665	368,888	10,715	67,536	221	4,008	441	5,073
Sundries	180,540	23,645,780	147,244	29,374,850	260,709	28,016,817	63,696	4,400,771
Total other articles	1,527,837	$29,021,323	1,650,802	$34,573,762	1,849,255	$40,392,459	1,778,513	$13,118,961
Total	5,171,320	$182,254,528	5,362,372	$285,280,726	6,457,656	$247,844,790	5,179,192	$162,153,565

---

*Articles marked thus were put on the free list in 1877. Flour was placed on the free list Sept. 15, 1878.

† Placed on free list in 1880.

STATEMENT No. 11 — (*Continued*).

ARTICLES.	1882.	
	Tons.	Value.
THE FOREST.		
*Fur and peltry	....	....
Product of Wood.		
Boards and scantling	1,570,925	$18,616,952
Shingles	7,307	204,382
Timber	71,831	816,478
*Staves	48,929	529,923
Wood	62,236	92,834
*Ashes, leached	10,515	24,943
Total of the forest	1,771,743	$20,285,512
AGRICULTURE.		
Product of Animals.		
*Pork	112	$13,734
*Beef	7	810
*Bacon	....	34
*Cheese	4	717
*Butter	....	....
*Lard, tallow and lard oil	1,753	444,958
*Wool	29	20,729
Hides	....	....
Total product of animals	1,905	$480,982
Vegetable Food.		
*Flour	9,372	$526,070
Wheat	642,215	23,491,781
Rye	43,372	1,330,900
Corn	251,687	7,166,443
*Corn meal	1,876	60,744
Barley	96,650	3,634,825
Barley malt	14,396	899,104
Oats	22,180	625,925
Bran and ship stuffs	4,286	107,966
Peas and beans	6,205	243,288
Apples	2,212	75,092
Potatoes	22,751	492,681
*Dried fruit	1,574	618,300
Total vegetable food	1,118,776	$39,273,119
All other Agricultural Products.		
*Cotton	50	$10,000
*Unmanufactured tobacco	10	4,800
*Hemp	3,895	779,091
*Clover and grass seed	227	40,944

STATEMENT No. 11 (*Continued*).

ARTICLES.	1882.	
	Tons.	Value.
*Flax seed	48,394	$2,177,751
*Hops	....	....
Total all other agricultural products	52,576	$3,012,586
Total agricultural products	1,173,257	$42,766,687
MANUFACTURES.		
*Domestic spirits	64	$23,896
*Oil meal and cake	3,144	188,702
*Leather	....	....
Furniture	51	18,666
*Bar and pig lead	....	....
Pig iron	46,982	981,460
Bloom and bar iron	25,069	1,206,460
Castings and iron ware	1,697	298,388
*Domestic woolens	278	244,244
*Domestic cottons	2,210	884,040
*Domestic salt	97,845	674,180
Foreign salt	10,195	153,404
Total manufactures	187,535	$4,673,440
Merchandise	283,174	$61,769,417
OTHER ARTICLES.		
*Live cattle, hogs and sheep	177	$17,368
Stone, lime and clay	366,840	3,548,791
Gypsum	4,854	5,330
*Rock, super-phosphates and albemarle	15,827	333,684
Anthracite coal	1,061,133	5,633,744
Bituminous coal	167,302	597,597
Copper ore	... .	....
Iron ore	364,361	1,872 097
Sundries	71,220	6,415,240
Total other articles	2,051,714	$18,423,851
Total	5,467,423	$147,918,907

* Articles marked thus are on the free list.

(No. 12.)

TOLLS paid on each article transported on all the canals, from 1862 *to* 1882.

ARTICLES.	1862.	1863.	1864.	1865.	1866.	1867.
BOATS.						
Tolls at two cents	$260,439	$239,491	$214,973	$191,535	$227,528	$202,028
Tolls on packets	818	2,842	558	2,048	921	840
Total boats	$261,257	$242,333	$215,531	$193,583	$228,449	$202,868
Passengers	$26	$15	$15	$21	$19	$8
THE FOREST.						
Fur and peltry	$79	$15	$4	$27	$275	$184
Product of wood.						
Boards and scantling	436,092	448,515	591,910	505,262	698,696	777,568
Shingles	10,744	6,931	7,032	6,385	9,840	8,974
Timber	79,808	104,938	108,586	98,296	77,842	80,231
Staves	150,848	135,006	150,085	116,562	240,530	143,637
Wood	20,895	18,507	14,447	13,902	13,258	8,503
Ashes, pot and pearl	967	1,131	369	868	247	530
Total of the forest	$699,433	$715,059	$872,423	$741,302	$940,688	$1,019,627

AGRICULTURE. *Product of animals.*						
Pork	$34,391	$49,886	$14,930	$4,218	$663	$388
Beef	15,611	19,353	19,789	1,997	562	91
Bacon	1,804	1,139	181	493	3	197
Cheese	2,523	2,464	1,691	4,811	3,210	2,169
Butter	1,973	1,814	606	673	336	225
Lard, tallow, lard oil	4,483	10,457	1,633	1,048	75	683
Wool	1,315	735	1,422	1,005	626	470
Hides	3,366	3,579	4,430	4,525	4,891	4,575
Total product of animals	$65,466	$89,426	$44,682	$18,770	$10,366	$8,798
Vegetable food.						
Flour	$295,578	$282,182	$202,769	$162,919	$84,006	$57,920
Wheat	1,882,767	1,275,680	978,877	626,154	442,345	639,429
Rye	40,231	34,488	30,642	54,596	80,305	48,773
Corn	1,176,702	955,226	486,932	929,084	1,293,628	771,376
Corn meal	2,170	5,224	2,699	2,465	1,945	878
Barley	61,071	93,477	74,525	130,644	238,768	149,413
Barley malt	5,689	6,963	10,714	15,789	12,714	7,645
Oats	111,804	250,729	342,913	262,823	288,007	273,493
Bran and ship stuffs	11,759	15,701	15,349	17,031	17,449	8,106
Peas and beans	11,619	18,675	19,369	14,258	21,739	31,498
Apples	25,843	60,756	23,546	47,518	16,993	40,226
Potatoes	11,189	12,496	12,496	18,066	14,287	12,281
Dried fruit	696	1,226	526	267	100	264
Total vegetable food	$3,637,118	$3,012,823	$2,195,315	$2,281,614	$2,512,286	$2,051,302

STATEMENT No. 12—(*Continued*).

ARTICLES.	1862.	1863.	1864.	1865.	1866.	1867.
All other agricultural products.						
Cotton	$49	$22	$23	$234	$231	$224
Unmanufactured tobacco	504	81	140	230	137	112
Hemp	10	48	47	47	16	2
Clover and grass seed	622	705	1,022	466	876	1,495
Flax seed	847	3,168	5,057	2,916	625	4,050
Hops	176	170	66	134	123	99
Total all other agricultural products,	$2,208	$4,194	$6,355	$4,027	$1,998	$5,982
Total agriculture	$3,704,792	$3,106,443	$2,246,352	$2,304,411	$2,524,650	$2,066,082
MANUFACTURES.						
Domestic spirits	$11,199	$16,248	$14,291	$2,533	$647	$236
Oil meal and cake	5,679	5,441	7,519	5,809	2,800	3,237
Leather	1,583	2,030	1,576	1,419	1,898	1,973
Furniture	3,188	3,917	4,298	2,907	2,750	2,247
Bar and pig lead	7,509	2,594	740	1,673	390	306
Pig iron	22,830	29,614	24,364	23,774	39,050	28,144
Bloom and bar iron	1,835	2,484	3,615	3,903	3,092	2,835
Castings and iron ware	15,928	18,947	19,740	22,827	26,955	30,329
Domestic woolens	66	7	11	20	35	69
Domestic cottons	82	31	84	86	102	111

Domestic salt	$49,129	$47,660	$65,979	$70,543	$73,168	$63,581
Foreign salt	47,528	8,044	5,530	8,596	2,485	4,690
Total manufactures	$161,556	$137,017	$147,747	$144,090	$153,372	$137,788
Merchandise	$117,444	$137,253	$117,692	$111,879	$131,021	$163,368
OTHER ARTICLES.						
Live cattle, hogs and sheep	$50	$22	$19	$90	$34	$20
Stone, lime and clay	22,093	31,160	36,195	37,033	47,314	52,764
Gypsum	5,661	6,961	8,749	8,106	10,795	13,001
Mineral coal	....	....	....	....	....	....
Anthracite coal	88,807	115,871	140,581	125,247	207,948	227,169
Bituminous coal	39,811	44,732	89,726	87,809	86,807	97,801
Copper ore	2,278	4,753	17,643	909	1,431	1,662
Iron ore	29,241	27,264	19,445	14,926	28,675	26,205
Sundries	56,494	76,324	71,864	70,549	75,436	79,695
Total other articles	$244,435	$307,087	$384,222	$344,669	$458,440	$498,317
Total	$5,188,943	$4,645,207	$3,983,982	$3,839,955	$4,436,639	$4,088,058

STATEMENT No. 12 — (*Continued*).

ARTICLES.	1868.	1869.	1870.	1871.	1872.	1873.	1874.
BOATS.							
Tolls at two cents........	$188,068	$165,273	$173,491	$186,903	$195,606	$189,618	$160,097
Tolls on packets	1,202	5,337	597	518	488	182	231
Total boats............	$189,270	$170,610	$174,088	$187,421	$196,094	$189,800	$160,328
Passengers	$27	$24	$737	....	....	....	$27
THE FOREST.							
Fur and peltry...........	$47	$14	$8	....	$1	$13	....
Product of wood.							
Boards and scantling	848,598	888,048	768,144	$710,137	749,548	632,369	$518,855
Shingles	11,490	9,386	10,097	9,159	6,531	4,768	7,926
Timber	53,541	53,307	54,632	48,301	40,697	48,582	62,092
Staves	152,901	84,806	77,220	52,273	72,622	68,527	60,769
Wood	8,174	5,358	5,369	5,340	4,873	5,589	5,690
Ashes, pot and pearl......	686	476	2,086	2,134	313	258	95
Total of the forest......	$1,075,437	$1,041,395	$917,556	$827,344	$874,585	$760,106	$718,427

AGRICULTURE. *Product of animals.*							
Pork	$330	$157	$44	$227	$87	$22	$19
Beef	142	11	52	62	94	....	1
Bacon	....	....	1	....	21	4	....
Cheese	1,830	1,673	1,610	861	457	329	395
Butter	215	164	136	48	12	7	9
Lard, tallow and lard oil	543	71	10	51	118	8	19
Wool	468	241	302	290	116	166	87
Hides	3,749	823	869	680	385	219	104
Total product of animals	$7,277	$3,140	$3,024	$2,219	$1,290	$755	$634
Vegetable food.							
Flour	$56,551	$73,237	$29,171	$20,770	$8,433	$8,563	$12,116
Wheat	665,403	1,048,658	498,632	558,227	231,841	736,199	695,003
Rye	40,494	13,009	13,783	30,911	9,654	25,760	4,504
Corn	784,613	330,067	161,338	565,722	896,854	602,329	500,297
Corn meal	838	1,432	23	44	207	169	162
Barley	95,007	105,354	73,706	68,374	79,873	42,233	42,264
Barley malt	8,936	5,864	11,775	12,824	17,147	12,923	7,215
Oats	303,382	114,532	93,833	108,184	82,430	60,525	52,389
Bran and ship stuffs	10,337	16,815	5,046	4,741	3,627	3,245	1,147
Peas and beans	13,126	5,823	3,710	2,442	1,707	2,327	4,280
Apples	25,100	36,805	50,850	42,825	27,125	40,779	38,507
Potatoes	13,121	9,906	10,055	7,452	16,279	9,864	13,809
Dried fruit	143	52	42	101	137	61	100
Total vegetable food	$2,017,051	$1,755,554	$951,964	$1,422,636	$1,469,314	$1,544,977	$1,371,793

STATEMENT No. 12—(*Continued*).

ARTICLES.	1868.	1869.	1870.	1871.	1872.	1873.	1874.
All other agri'tural prod'ts.							
Cotton	$133	$121	$136	$182	$89	$118	$49
Unmanufactured tobacco	256	81	36	34	48	14	11
Hemp	....	4	9	....	9	8	5
Clover and grass seed	1,017	13	5	24	98	13	47
Flax seed	3,298	459	1,033	3,349	2,034	168	465
Hops	21	109	20	27	8	2	9
Total all other ag'al pro'ts	$4,725	$787	$2,239	$3,616	$2,286	$323	$586
Total agricultural pro'cts	$2,029,053	$1,759,481	$957,227	$1,428,471	$1,472,890	$1,546,055	$1,373,013
MANUFACTURES.							
Domestic spirits	$166	$345	$124	$114	$39	$31	$44
Oil meal and cake	938	362	195	247	273	334	358
Leather	2,174	844	518	255	102	39	43
Furniture	2,626	724	400	416	231	159	142
Bar and pig lead	99	2,491	380	924	252	36	174
Pig iron	34,070	10,720	9,115	8,949	8,476	4,064	5,253
Bloom and bar iron	2,092	2,507	2,111	2,175	1,676	1,614	3,319
Castings and iron ware	27,603	10,579	6,554	5,538	3,716	6,728	4,407
Domestic woolens	72	103	71	101	3	7	14
Domestic cottons	158	208	156	61	14	8	50

Domestic salt............	69,771	73,722	52,390	59,643	54,978	53,615	45,542
Foreign salt............	6,925	1,784	1,145	1,094	1,821	1,907	2,568
Total manufactures	$146,694	$104,389	$73,159	$79,517	$71,581	$68,542	$61,914
Merchandise............	$206,395	$166,160	$132,155	$140,199	$160,703	$79,646	$60,110
OTHER ARTICLES.							
Live cattle, hogs and sheep	$12	$13	$8	$17	$1	$2	$1
Stone, lime and clay......	56,115	42,596	38,044	40,162	40,474	42,211	30,769
Gypsum	13,035	7,185	4,787	3,957	5,686	4,835	2,412
Anthracite coal..........	290,453	167,930	115,674	71,990	111,979	122,783	87,213
Bituminous coal	110,831	133,725	82,201	68,151	64,771	83,772	75,973
Copper ore	293	207	....	1	....	....	....
Iron ore	28,970	24,385	18,946	24,443	32,571	31,763	15,490
Sundries	99,978	160,401	96,996	229,165	41,141	47,203	51,394
Total other articles.....	$599,687	$536,442	$356,656	$437,886	$296,558	$332,569	$263,252
Total	$4,246,563	$3,778,501	$2,611,578	$3,100,838	$3,072,411	$2,976,718	$2,637,071

STATEMENT No. 12 — (*Continued*).

ARTICLES.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.
BOATS.								
Tolls at two cents	$132,369	$116,464	$4,789	......	......	......	......	......
Tolls on packets	109	303	......	......	......	......	$852	$937
Total boats	$132,478	$116,767	$4,789	......	......	......	$852	$937
Passengers	$19	$24	......	......	......	......	......	......
THE FOREST.								
*Fur and peltry	......	......	......	......	......	......	......	......
Product of wood.								
Boards and scantling	$302,274	$341,491	$196,960	$138,098	$211,503	$239,978	$261,414	$276,807
Shingles	4,945	3,981	5,700	5,427	2,077	1,173	1,136	1,433
Timber	22,100	18,793	19,117	19,084	26,706	16,682	18,714	23,038
Staves	29,384	19,364	13,539	13,222	7,701	65	......	......
Wood	2,664	4,358	5,990	3,604	1,188	1,250	1,102	1,051
Ashes, pot and pearl	222	476	231	120	6	......	......	......
Total of the forest	$361,589	$388,463	$241,546	$229,555	$249,181	$259,148	$282,366	$302,329
AGRICULTURE.								
Product of Animals.								
*Pork	$18	$18	......	......	......	......	......	......
*Beef	......	1	......	......	......	......	......	......
*Bacon	......	......	......	......	......	......	......	......
*Cheese	187	214	$23	$96	......	......	......	......

*Butter	14	60	4	3	....	....	....	....
*Lard, tallow and lard oil	12	16	....	....	....	....	....	....
*Wool	22	37	....	....	....	....	....	....
Hides	398	334	233	159	$22	$22	....	....
Total product of animals	$651	$700	$260	$258	$22	$22	....	....
Vegetable Food.								
*Flour	$6,260	$1,364	$903	$186	....	....	....	....
Wheat	466.662	249,232	132,944	270,508	$309,934	$314,220	$133,059	$203,129
Rye	3,968	11,039	10,899	20,606	17,436	6,750	2,853	11,238
Corn	185,680	239,169	243,451	247,092	207,750	388,101	155,011	79,880
*Corn meal	58	35	....	....	....	....	....	....
Barley	40,335	37,739	31,210	19,723	18,411	19,098	13,729	16,256
Barley malt	5,798	6,137	3,206	2,357	2,651	2,709	3,474	3,248
Oats	33,391	27,740	21,029	27,122	6,301	6,035	9,533	4,184
Bran and ship stuffs	717	1,341	292	615	101	60	308	185
Peas and beans	2,909	2,866	1,058	1,143	854	836	636	1,142
Apples	15,186	12,635	4,120	9,166	3,997	4,185	644	134
Potatoes	12,313	6,997	11,259	8,043	4,221	4,976	3,936	2,748
*Dried fruit	11	39	....	....	....	....	....	....
Total vegetable food	$773,288	$596,623	$460,371	$606,561	$571,659	$746,964	$323,183	$322,144

STATEMENT No. 12—(*Continued*).

ARTICLES.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882
All other agricultural products.								
*Cotton	$29	$64	....	....	....	....	....	....
*Unmanufactured tobacco	29	15	....	....	....	....	....	....
*Hemp	7	5	....	....	....	....	....	....
*Clover and grass seed	....	24	....	....	....	....	....	....
*Flax seed	306	154	$1,756	$6	....	....	....	....
*Hops	6	....	....	....	....	....	....	....
Total all other agr. products	$377	$262	$1,756	$6	....	....	....	....
Total agricultural products	$774,316	$597,585	$462,387	$606,825	$571,681	$746,986	$323,183	$322,144
MANUFACTURES.								
*Domestic spirits	$29	$17	....	....	....	....	....	....
*Oil meal and cake	188	165	$1,111	$667	....	....	....	....
*Leather	2	5	....	....	....	....	....	....
Furniture	168	145	674	80	$22	$12	$1	....
*Bar and pig lead	7	13	....	....	....	....	....	....
Pig iron	6,835	4,374	2,497	4,147	6,872	15,186	122	$5 8
Bloom and bar iron	2,516	2,861	732	777	3,778	1,000	298	316
Castings and iron ware	2,861	702	571	523	64	594	10	101
*Domestic woolens	5	....	....	....	....	....	....	....
*Domestic cottons	36	....	....	....	....	....	....	....
Domestic salt	54,080	28,975	18,528	20,450	18,168	17,801	....	....
Foreign salt	926	2,474	3,182	6,174	1,803	2,249	....	1
Total manufactures	$67,683	$309,731	$27,295	$32,818	$30,707	$36,842	$431	$1,006

Merchandise.	$27,374	$14,233	$14,233	$25,075	$31,104	$ 44,611	$1,760	$2,099
OTHER ARTICLES.								
*Live cattle, hogs and sheep	....	$28	....	....	....	....	....	....
Stone, lime and clay	$25,944	17,149	$9,966	$11,338	$9,293	$12,818	$4,220	$5,441
Gypsum	1,530	1,603	1,384	1,360	1,309	893	20	....
Anthracite coal	97,601	75,945	68,336	32,360	16,555	14,202	1,449	1,639
Bituminous coal	43,705	37,134	17,168	17,042	5,672	6,034	4,959	5,450
Copper ore	....	....	....	....	....	....	....	....
Iron ore	17,608	12,221	10,032	7,825	12,120	14,628	10,620	11,514
Petroleum	....	....	....	9,062	1,665	4	11	5
Sundries	40,185	39,121	23,760	20,088	12,287	19,353	2,519	3,262
Total other articles	$226,573	$183,201	$130,640	$99,075	$58,901	$67,832	$23,798	27,311
Total	$1,590,032	$1,340,004	$880,896	$993,348	$941,574	$1,155,419	$632,390	$655,826

(No. 13.)

STATEMENT of the tons and value of each article which came to the Hudson river from the canals, for different years, from 1861 to 1882, both inclusive.

ARTICLES.	1861.		1862.		1863.	
	Tons.	Value.	Tons.	Value.	Tons.	Value.
THE FOREST.						
Fur and peltry	20	$51,610	22	$57,330	....	....
Product of wood.						
Boards and scantling,	502,680	5,051,944	686,843	11,370,018	777,176	$11,657,654
Shingles	5,648	158,176	6,228	174,423	4,508	162,336
Timber	23,819	202,480	70,135	981,987	91,211	1,368,161
Staves	132,114	1,056,918	178,515	1,428,128	141,239	1,129,917
Wood	21,533	31,686	23,094	37,117	31,560	67,626
Ashes, pot and pearl	4,772	520,650	3,225	351,900	3,865	421,680
Total of the forest	690,586	$7,073,464	968,062	$14,400,903	1,049,559	$14,807,374
AGRICULTURE. *Product of animals.*						
Pork	1,818	$156,269	27,151	$2,204,735	37,489	$2,928,851
Beef,	4,447	222,416	11,519	720,040	13,835	778,248
Bacon	308	61,690	3,366	740,718	1,857	259,922
Cheese	5,254	840,566	6,873	1,511,897	4,755	1,046,037
Butter	2,067	661,193	3,014	1,024,434	2,589	983,706
Lard, tallow and lard oil	660	145,245	5,061	1,309,318	10,388	2,181,689

Wool	927	834,106	881	863,310	217	285,430
Hides	29	12,171	233	117,101	88	53,039
Total product of animals	15,510	$2,933,656	58,098	$8,491,553	71,218	$8,516,872
Vegetable food.						
Flour	165,323	$8,419,235	197,263	$10,959,024	175,930	$9,358,914
Wheat	888,972	33,780,964	980,036	39,201,493	670,516	32,104,479
Rye	22,555	676,699	19,606	609,239	12,400	465,008
Corn	625,637	11,172,087	663,875	17,993,820	559,290	16,578,938
Corn meal	361	11,725	1,181	38,311	3,241	120,040
Barley	49,120	1,391,745	53,431	2,716,111	78,321	4,536,670
Barley malt	....	....	8,633	758,746	7,291	751,194
Oats	95,863	2,396,571	94,866	2,549,595	201,080	9,425,623
Bran and ship stuffs	16,931	677,165	10,923	590,701	13,842	830,565
Peas and beans	11,350	378,408	7,317	304,905	11,889	792,608
Apples	....	....	20,989	362,969	54,040	1,441,068
Potatoes	40,445	471,864	34,190	398,900	35,588	474,518
Dried fruit	762	152,458	330	102,073	421	143,283
Total vegetable food	1,917,319	$59,528,921	2,092,649	$76,585,887	1,823,859	$77,022,848
All other agricultural products.						
Cotton	2	$726	3	$3,348	52	$86,777
Unmanufactured tobacco	1,097	351,771	523	240,169	208	134,230
Hemp	37	5,923	61	10,979	34	6,910
Clover and grass seed	30	4,848	165	26,440	553	85,575

STATEMENT No. 13—(*Continued.*)

ARTICLES.	1861.		1862.		1863.	
	Tons.	Value.	Tons.	Value.	Tons.	Value.
Flax seed	114	$4,543	545	$21,800	2,275	$182,028
Hops	138	32,885	115	32,182	72	29,020
Total all other agricultural products	1,418	$399,996	1,412	$334,918	3,176	$524,540
Total agricultural products	1,934,247	$62,862,573	2,152,159	$85,412,358	1,898,253	$86,064,260
MANUFACTURES.						
Domestic spirits	8,149	$529,749	6,447	$419,042	8,343	$1,168,043
Oil meal and cake,	5,191	155,745	4,078	133,114	4,150	124,620
Leather	3,539	1,699,012	2,814	1,351,124	3,761	2,256,870
Furniture	345	69,055	300	59,814	332	92,909
Bar and pig lead	5,157	618,878	3,218	386,180	3,439	619,139
Pig iron	14,348	430,426	19,685	590,582	22,062	882,510
Bloom and bar iron	3,379	202,644	5,636	338,184	8,053	483,153
Castings and iron ware	336	20,087	448	26,897	548	43,923
Domestic woolens	46	64,050	92	128,800	3	4,770
Domestic cottons	76	46,020	1,984	202,800	136	216,800
Domestic salt	2,478	24,787	693	50,358	5,257	105,135
Foreign salt	30	590	107	6,453	184	5,516
Total manufactures	43,074	$3,861,034	45,502	$3,693,347	56,268	$6,003,388
Merchandise	8,405	$1,377,702	5 470	$2,447,142	5,123	$2,508,451

OTHER ARTICLES.						
Live cattle, hogs and sheep	....	$40	....	....	....	....
Stone, lime and clay	34,650	346,498	21,470	$214,697	31,206	$624,102
Gypsum	796	2,387	859	2,578	1,292	25,838
Mineral coal	63,803	319,019	....	....	....	....
Anthracite coal	....	....	7,902	47,415	8,438	67,503
Bituminous coal	....	....	67,340	404,646	62,389	499,115
Copper ore	3,121	811,537	6,242	774,930	2,979	893,825
Iron ore	....	....	98,720	2,039,637	118,627	2,372,538
Sundries	201,462	4,778,505	28,983	1,738,915	40,593	7,306,900
Total other articles	303,832	$6,257,986	231,516	$5,222,818	265,524	$11,789,821
Total	2,980,144	$81,432,759	3,402,709	$111,176,568	3,274,727	$121,173,294

STATEMENT No. 13—(*Continued*).

ARTICLES.	1864.		1865.	
	Tons.	Value.	Tons.	Value.
THE FOREST.				
Fur and peltry	....	....	....	....
Product of wood.				
Boards and scantling	825,479	$16,858,620	820,892	$14,776,042
Shingles	3,854	169,631	4,262	170,470
Timber	82,422	1,648,050	74,450	1,302,892
Staves	143,125	1,986,866	111,637	1,562,917
Wood	46,475	116,189	39,356	98,392
Ashes, pot and pearl	4,793	697,280	1,019	148,360
Total of the forest	1,106,148	$19,476,636	1,051,616	$18,059,073
AGRICULTURE. *Product of animals.*				
Pork	9,433	$2,151,894	2,633	$492,348
Beef	13,234	1,985,184	1,466	274,920
Bacon	290	115,920	631	252,620
Cheese	2,258	813,261	8,760	2,452,749
Butter	725	608,931	921	607,847
Lard, tallow and lard oil	1,483	503,849	950	437,529
Wool	651	1,171,310	386	578,980
Hides	427	170,484	124	49,588
Total product of animals	28,501	$7,520,481	15,871	$5,146,581

Vegetable food.				
Flour	129,389	$11,187,260	106,894	$8,046,741
Wheat	477,502	37,199,357	313,750	19,870,830
Rye	18,122	1,035,557	31,182	1,392,060
Corn	263,556	15,060,403	513,697	15,961,297
Corn meal	1,452	107,640	1,736	88,380
Barley	75,989	5,699,295	108,566	5,337,942
Barley malt	31,293	3,619,842	11,109	913,072
Oats	219,682	13,043,664	176,102	6,493,721
Bran and ship stuffs	12,010	720,604	15,384	461,516
Peas and beans	11,409	760,614	8,040	535,916
Apples	19,967	931,787	38,005	2,526,855
Potatoes	28,438	710,940	34,641	866,057
Dried fruit	217	86,860	92	37,217
Total vegetable food	1,289,026	$90,163,823	1,359,198	$62,531,613
All other agricultural products.				
Cotton	20	$40,500	20	$28,140
Unmanufactured tobacco	317	253,320	585	467,800
Hemp	29	8,635	56	16,845
Clover and grass seed	232	64,848	95	26,488
Flax seed	2,313	277,531	3,416	409,912
Hops	124	86,625	90	72,160
Total all other agricultural products	3,035	$731,459	4,262	$1,021,345
Total agricultural products	1,320,562	$98,416,123	1,379,331	$68,699,539

STATEMENT No. 13 — (*Continued.*)

ARTICLES.	1864.		1865.	
	Tons.	Value.	Tons.	Value.
MANUFACTURES.				
Domestic spirits	7,936	$3,095,604	1,596	$678,295
Oil meal and cake	4,987	199,470	4,611	184,432
Leather	3,064	2,451,381	3,812	3,048,580
Furniture	244	97,641	305	121,574
Bar and pig lead	1,042	333,220	1,021	327,033
Pig iron	15,576	934,548	17,002	1,020,122
Bloom and bar iron	9,179	917,856	10,306	1,030,618
Castings and ironware	442	70,453	144	23,062
Domestic woolens	16	40,875	10	24,000
Domestic cottons	91	219,600	196	448,500
Domestic salt	36,873	1,106,190	19,203	576,069
Foreign salt	30	1,468	5	235
Total manufactures	79,480	$9,468,306	58,211	$7,482,520
Merchandise	3,469	$1,870,734	4,302	$2,019,625
OTHER ARTICLES.				
Live cattle, hogs and sheep	1	$270	....	....
Stone, lime and clay	42,858	1,714,335	54,680	$2,187,175
Gypsum	1,152	46,106	1,117	44,665
Mineral coal	....	....	....	....

Anthracite coal	11,806	141,671	10,379	124,449
Bituminous coal	73,530	882,368	52,515	630,182
Copper ore	1,329	664,575	1,437	718,400
Iron ore	126,032	1,260,323	72,681	726,810
Sundries	38,890	11,666,755	43,912	13,173,308
Total other articles	295,598	$16,376,403	236,721	$17,605,089
Total	2,805,257	$145,608,202	2,730,181	$113,865,846

STATEMENT No. 13—(*Continued*).

ARTICLES.	1866.		1867.	
	Tons.	Value.	Tons.	Value.
THE FOREST.				
Fur and peltry	....	....	....	....
Product of wood.				
Boards and scantling	1,069,259	$24,574,199	1,125,091	$20,251,664
Shingles	6,816	272,685	5,548	221,960
Timber	81,697	1,429,724	67,398	1,179,430
Staves	145,030	1,901,340	136,944	1,917,287
Wood	18,961	70,455	22,850	57,127
Ashes, pot and pearl	8,121	1,181,480	1,456	211,800
Total of the forest	1,329,884	$29,429,883	1,359,287	$23,839,268
AGRICULTURE. *Product of animals.*				
Pork	11	$2,030	147	$21,022
Beef	370	44,822	237	28,120
Bacon	5	1,650	17	5,160
Cheese	5,835	1,575,946	4,142	993,826
Butter	734	459,146	347	222,593
Lard, tallow and lard oil	54	20,054	618	228,536

Wool	292	291,741	180	162,462
Hides	8	3,520	62	19,719
Total product of animals	7,309	$2,398,909	5,750	$1,681,438
Vegetable food.				
Flour	61,641	$6,106,993	48,606	$4,249,580
Wheat	227,525	16,760,950	283,983	20,329,841
Rye	48,987	1,976,970	24,928	1,113,298
Corn	742,463	25,190,743	431,361	15,405,772
Corn meal	1,097	55,869	445	22,688
Barley	178,796	8,939,733	92,786	4,639,335
Barley malt	4,986	767,753	14,295	947,551
Oats	179,530	7,293,119	141,456	6,199,789
Bran and ship stuffs	15,067	452,015	6,511	195,306
Peas and beans	15,699	1,046,564	22,864	1,524,228
Apples	15,109	1,007,227	31,716	1,700,108
Potatoes	42,520	1,062,995	34,846	871,139
Dried fruit	68	27,180	65	23,720
Total vegetable food	1,533,488	$70,688,111	1,133,862	$57,222,355
All other agricultural products.				
Cotton	12	$8,330	88	$52,590
Unmanufactured tobacco	168	67,133	224	89,640
Hemp	2	315	8	1,494
Clover and grass seed	277	77,364	266	74,368
Flax seed	679	81,504	3,473	416,814

STATEMENT No. 13—(*Continued*).

ARTICLES.	1866.		1867.	
	Tons.	Value.	Tons.	Value.
Hops	100	$80,303	41	$33,560
Total all other agricultural products	1,238	$314,949	4,100	$668,466
Total agricultural products	1,542,035	$73,401,969	1,143,712	$59,572,259
MANUFACTURES.				
Domestic spirits	526	$223,661	147	$81,400
Oil meal and cake	1,864	74,578	2,293	91,731
Leather	4,329	3,422,910	5,089	3,562,038
Furniture	225	89,820	220	88,077
Bar and pig lead	17	5,424	488	156,048
Pig iron	8,029	481,687	17,344	2,040,561
Bloom and bar iron	8,564	856,384	9,475	947,522
Castings and iron ware	252	40,511	444	71,153
Domestic woolens	112	268,800	204	467,935
Domestic cottons	260	597,885	238	523,050
Domestic salt	35,869	1,074,534	41,308	1,239,228
Foreign salt	133	6,625	....	....
Total manufactures	60,180	$7,142,810	77,250	$8,268,743
Merchandise	6,372	$3,115,323	5,196	$3,279,786

OTHER ARTICLES.				
Live cattle, hogs and sheep	....	....	....	....
Stone, lime and clay	57,701	$2,308,068	85,333	$3,397,348
Gypsum	1,464	58,550	1,614	64,596
Mineral coal	....	....	....	....
Anthracite coal	14,212	113,697	13,774	110,194
Bituminous coal	110,746	886,773	124,686	997,491
Copper ore	1,829	914,675	1,991	995,525
Iron ore	137,673	1,376,781	154,061	1,540,604
Sundries	43,511	13,052,939	62,791	18,837,020
Total other articles	367,136	$18,711,483	444,250	$25,942,778
Total	3,305,607	$131,801,477	3,029,695	$120,902,834

STATEMENT No. 13 — (*Continued*).

ARTICLES.	1868.		1869.	
	Tons.	Value.	Tons.	Value.
THE FOREST.				
Fur and peltry	....	....	....	....
Product of Wood.				
Boards and scantling	1,227,776	$22,099,620	1,280,996	$21,520,732
Shingles	6,457	258,259	4,339	154,892
Timber	48,353	846,182	63,033	1,260,669
Staves	154,120	2,157,694	83,246	1,165,448
Wood	19,396	32,209	20,323	43,407
Ashes, pot and pearl	3,251	472,800	982	142,760
Total of the forest	1,459,353	$25,866,764	1,453,419	$24,287,908
AGRICULTURE. *Product of animals.*				
Pork	6	$975	7	$1,336
Beef	304	28,500	....	....
Bacon	....	....	....	....
Cheese	3,840	1,152,172	3,317	1,061,488
Butter	174	138,440	133	77,024
Lard, tallow and lard oil	133	37,934	82	31,046
Wool	135	110,061	77	61,145
Hides	28	8,704	5	1,584
Total product of animals	4,870	$1,556,786	3,621	$1,233,623

Vegetable food.				
Flour	48,421	$5,102,191	59.682	$3,470,383
Wheat	342,431	24,769,172	561,568	28,452,826
Rye	22,512	1,350,788	10,531	451,367
Corn	457,707	18,635,254	197,371	7,471,924
Corn meal	475	25,300	400	19,425
Barley	81,283	7,281,714	85,864	5,581,244
Barley malt	8,387	1,096,410	5,598	618,200
Oats	179,914	8,883,260	86,041	3,818,059
Bran and ship stuffs	9,294	260,220	8,867	230,518
Peas and beans	10,241	938,749	3,573	267,998
Apples	25,417	1,387,216	31,970	1,333,774
Potatoes	36,354	1,030,031	31,330	522,480
Dried fruit	29	10,638	44	13,936
Total vegetable food	1,222,465	$70,770,943	1,082,839	$52,252,134
All other agricultural products.				
Cotton	119	$103,004	11	$6,384
Unmanufactured tobacco	113	45,444	70	35,125
Hemp	27	6,480	23	5,544
Clover and grass seed	363	72,570	....	....
Flax seed	1,545	154,468	321	25,516
Hops	52	20,820	220	70,464
Total all other agricultural products	2,219	$402,786	645	$143,033
Total agricultural products	1,229,544	$72,730,515	1,087,105	$53,628,790

STATEMENT No. 13 — (*Continued*).

ARTICLES.	1868.		1869.	
	Tons.	Value.	Tons.	Value.
MANUFACTURES.				
Domestic spirits	39	$2,125	5	$1,500
Oil meal and cake	2,501	147,693	1,837	91,853
Leather	5,032	4,051,159	2,283	1,812,697
Furniture	220	103,526	150	67,008
Bar and pig lead	....	....	18	3,770
Pig iron	19,690	708,791	12,988	493,574
Bloom and bar iron	10,098	908,784	7,473	672,600
Castings and iron ware	157	18,965	225	26,923
Domestic woolens	161	401,625	270	674,750
Domestic cottons	263	525,700	179	356,700
Domestic salt	51,653	1,442,694	59,167	1,656,659
Foreign salt	....	....	28	809
Total manufactures	89,814	$8,311,062	84,623	$5,858,843
Merchandise	5,058	$3,440,885	5,122	$3,445,110
OTHER ARTICLES.				
Live cattle, hogs and sheep	....	....	....	....
Stone, lime and clay	77,119	$3,084,820	85,298	$3,411,977
Gypsum	708	28,356	151	910
Mineral coal	....	....	....	....

Anthracite coal	20,280	101,403	22,482	157,377
Bituminous coal	108,261	870,089	131,084	1,048,664
Copper ore	4,082	195,615	....	....
Iron ore	183,857	1,875,144	155,279	1,552,793
Sundries	66,720	19,877,929	71,579	21,473,688
Total other articles	457,027	$25,997,356	465,873	$27,645,409
Total	3,240,806	$136,446,582	3,096,142	$114,866,060

STATEMENT No. 13 — (*Continued*).

ARTICLES.	1870.		1871.	
	Tons.	Value.	Tons.	Value.
THE FOREST.				
Fur and peltry	....	....	....	....
Product of wood.				
Boards and scantling	1,280,010	$16,128,153	1,220,082	$15,691,830
Shingles	3,610	129,984	4,604	184,055
Timber	45,816	1,708,025	32,104	798,323
Staves	114,975	1,625,129	72,330	1,157,283
Wood	19,160	45,846	....	....
Ashes, pot and pearl	1,946	122,081	281	40,760
Total of the forest	1,465,517	$19,759,217	1,329,401	$17,872,251
AGRICULTURE. *Product of animals.*				
Pork	594	$947	129	$11,735
Beef	175	14,300	224	14,000
Bacon	....	....	....	....
Cheese	4,359	958,991	2,635	579,887
Butter	139	97,090	56	22,640
Lard, tallow and lard oil	4	1,216	53	11,803

Wool	135	121,938	36	39,590
Hides	19	5,920	20	6,000
Total product of animals	5,426	$1,200,402	3,153	$685,655
Vegetable food.				
Flour	48,964	$2,552,476	31,131	$1,879,423
Wheat	256,720	24,229,115	647,319	32,803,517
Rye	17,866	638,130	29,922	1,004,561
Corn	137,322	4,610,148	563,583	14,693,313
Corn meal	569	44,355	529	22,028
Barley	110,837	5,120,254	88,253	3,677,238
Barley malt	14,856	1,390,016	13,194	882,159
Oats	101,240	3,859,831	109,338	3,416,723
Bran and ship stuffs	7,104	184,706	3,892	109,002
Peas and beans	6,602	385,135	3,286	191,670
Apples	47,946	1,163,145	36,882	1,716,152
Potatoes	23,932	717,957	40,165	803,294
Dried fruit	12	3,776	52	20,820
Total vegetable food	1,043,970	$44,899,044	1,567,546	$61,219,900
All other agricultural products.				
Cotton	47	$252,053	11	$37,814
Unmanufactured tobacco	63	31,450	56	27,775
Hemp	....	....	....	....
Clover and grass seed	1	1,475	48	4,795

STATEMENT No. 13—(*Continued*).

ARTICLES.	1870.		1871.	
	Tons.	Value.	Tons.	Value.
Flax seed	46	$3,234	899	$62,909
Hops	33	9,044	41	37,170
Total all other agricultural products	190	$297,256	1,055	$170,463
Total agricultural products	1,049,586	$46,396,702	1,570,754	$62,076,018
MANUFACTURES.				
Domestic spirits	20	$5,250	14	$3,325
Oil meal and cake	1,567	78,348	1,817	90,835
Leather	1,425	1,139,724	917	723,835
Furniture	153	60,981	165	70,820
Bar and pig lead	7	1,330	270	54,050
Pig iron	16,773	503,216	14,024	476,810
Bloom and bar iron	5,509	440,672	4,535	408,168
Castings and ironware	391	23,447	258	33,592
Domestic woolens	118	420,500	34	80,880
Domestic cottons	122	146,520	568	680,040

Domestic salt	65,081	1,822,268	72,270	2,023,535
Foreign salt	....	... .	39	1,266
Total manufactures	91,166	$4,642,256	94,911	$4,647,161
Merchandise	12,118	$5,605,311	7,603	$3,831,785
OTHER ARTICLES.				
Live cattle, hogs and sheep	....	....	....	....
Stone, lime and clay	91,111	$3,106,800	83,305	$3,332,212
Gypsum	9	56	273	1,637
Anthracite coal	19,798	118,781	39,207	274,449
Bituminous coal	143,445	1,147,559	54,800	438,401
Copper ore	....	....	....	....
Iron ore	208,020	2,080,194	208,388	2,113,873
Sundries	75,532	22,660,134	87,581	26,274,430
Total other articles	537,915	$29,113,534	473,554	$32,535,002
Total	3,156,302	$105,517,020	3,476,223	$106,839,570

STATEMENT No. 13 — (*Continued*).

ARTICLES.	1872.		1873.		1874.	
	Tons.	Value.	Tons.	Value.	Tons.	Value.
THE FOREST.						
Fur and peltry	....	....	....	....	....	....
Product of wood.						
Boards and scantling	1,315,569	$20,522,240	1,165,655	$12,747,530	944,372	$14,165,581
Shingles	1,925	77,045	1,922	77,099	3,333	119,987
Timber	29,790	491,542	28,189	465,120	50,733	1,141,491
Staves	100,240	2,004,804	104,030	2,070,600	81,400	1,627,997
Wood	20,313	36,275	8,675	31,212	12,639	31,598
Ashes, pot and pearl	28	4,000	....	240	204	46,683
Total of the forest	1,467,865	$23,135,906	1,308,471	$15,391,801	1,092,681	$17,133,337
AGRICULTURE.						
Product of animals.						
Pork	6	$580	7	$602	19	$2,204
Beef	176	12,100	....	....	....	....
Bacon	....	....	....	....	....	....
Cheese	1,500	329,934	1,109	221,810	1,455	436,620
Butter	31	16,094	10	5,740	16	10,304
Lard, tallow and lard oil	88	15,750	63	10,080	8	2,082

Wool	4	4,800	3	3,024	21	19,776
Hides	....	....	....	....	....	....
Total product of animals	1,805	$379,258	1,192	$241,256	1,519	$470,986
Vegetable food.						
Flour	15,707	$1,091,770	10,803	$725,202	17,760	$1,151,780
Wheat	341,210	18,761,556	672,024	35,756,064	708,942	29,302,970
Rye	13,340	428,852	26,185	748,138	10,061	373,060
Corn	837,601	19,743,471	520,765	11,154,305	488,918	15,889,823
Corn meal	22	680	....	....	23	864
Barley	107,479	4,926,124	53,882	3,322,755	70,068	4,087,342
Barley malt	19,316	1,318,853	14,375	1,384,358	9,130	807,344
Oats	90,955	2,728,683	54,857	1,571,138	58,279	2,258,293
Bran and ship stuffs	4,391	87,820	4,917	98,343	2,047	40,923
Peas and beans	3,147	209,834	3,918	261,224	7,110	474,000
Apples	30,737	819,652	26,629	1,254,560	37,346	996,884
Potatoes	24,348	1,205,473	31,770	847,209	59,428	1,386,650
Dried fruit	92	35,098	46	15,657	....	....
Total vegetable food	1,488,345	$51,362,866	1,420,171	$57,138,953	1,469,112	$56,769,933
All other agricultural products.						
Cotton	....	....	7	$3,475	7	$1,995
Unmanufactured tobacco	....	....	29	25,875	42	31,540
Hemp	31	$6,430	25	5,390	....	....
Clover and grass seed	....	....	1	153	2	396

STATEMENT No. 13—(*Continued*).

ARTICLES.	1872.		1873.		1874.	
	Tons.	Value.	Tons.	Value.	Tons.	Value.
Flax seed	58	$3,450	40	$2,376	167	$11,679
Hops	9	7,240	4	2,840	23	18,080
Total all other agricul'l products	98	$17,120	106	$40,109	241	$63,690
Total agricultural products	1,490,248	$1,759,244	1,421,469	$57,420,318	1,470,872	$57,304,609
MANUFACTURES.						
Domestic spirits	7	$1,926	50	$15,500	....	....
Oil meal and cake	1,919	153,540	1,964	98,193	2,267	$90,960
Leather	398	238,050	160	89,656	181	97,389
Furniture	147	32,316	115	25,289	50	10,648
Bar and pig lead	....	....	....	....	698	111,600
Pig iron	14,912	596,522	6,934	356,596	12,978	389,336
Bloom and bar iron	10,368	829,448	790	79,020	11,192	1,119,370
Castings and iron ware	265	35,984	93	15,112	219	30,750
Domestic woolens	9	25,875	19	42,780	66	165,250
Domestic cottons	78	115,800	21	30,975	28	22,160

Domestic salt	52,833	1,056,640	**36,275**	581,037	21,747	304,870
Foreign salt.	....	....	....	....	....	....
Total manufactures	80,936	$3,086,101	46,421	$1,334,158	49,426	$2,342,034
Merchandise	7,672	$4,591,693	12,091	$7,088,378	12,905	$6,302,554
OTHER ARTICLES.						
Live cattle, hogs and sheep	....	....	....	....	....	....
Stone, lime and clay	111,296	$2,225,826	103,530	$2,070,592	78,159	$1,563,179
Gypsum	416	4,162	403	4,027	80	479
Anthracite coal	39,092	234,552	29,559	177,355	36,781	220,684
Bituminous coal	81,474	651,808	90,591	724,718	129,603	1,036,826
Copper ore	....	....	....	....	....	....
Iron ore	307,336	1,594,658	327,302	2,618,411	187,792	2,629,069
Sundries	61,609	19,802,412	36,812	11,039,739	64,813	19,443,705
Total other articles	601,223	$24,513,418	588,197	$16,634,842	497,228	$24,893,942
Total	3,647,944	$107,086,362	3,376,649	$97,869,497	3,123,112	$107,976,476

STATEMENT No. 13 – (*Continued*).

ARTICLES.	1875.		1876.		1877.	
	Tons.	Value.	Tons.	Value.	Tons.	Value.
THE FOREST.						
*Fur and peltry	....	....	....	....	20	$81,200
Product of wood.						
Boards and scantling	755,657	$9,067,906	838,695	$8,542,449	913,948	9,773,901
Shingles	2,535	91,516	1,353	37,871	1,643	45,987
Timber	12,952	259,023	12,118	212,065	12,997	227,430
Staves	33,764	675,275	25,905	518,122	36,582	731,638
Wood	8,322	28,548	12,654	27,114	13,176	21,177
Ashes, pot and pearl	45	1,260	....	....	....	....
*Ashes, leached	....	....	....	....	....	....
Total of the forest	813,275	$10,123,528	890,725	$9,337,621	978,366	$9,881,333
AGRICULTURE.						
Product of animals.						
*Pork	....	....	....	....	3,881	$388,128
*Beef	....	....	....	....	....	....
*Bacon	....	....	....	....	....	....
Cheese	1,179	$330,022	....	....	81	19,344
Butter	16	7,776	343	$95,928	3	1,300

*Lard, tallow and lard oil	6	1,785	65	36,260	4,379	875,860
*Wool	4	3,120	60	16,785	44	34,810
Hides	29	2,850	....	....	48	6,253
Total product of animals	1,234	$345,553	468	$148,973	8,436	$1,325,695
Vegetable food.						
Flour	11,023	$765,734	3,914	$253,708	3,089	$228,824
Wheat	675,686	27,883,845	353,769	17,510,156	381,983	19,099,132
Rye	6,457	207,557	19,095	579,762	35,493	1,141,163
Corn	235,646	6,564,456	318,390	6,822,924	659,431	14,130,682
*Corn meal	108	3,700	....	....	....	....
Barley	91,271	4,383,564	90,269	4,137,335	134,156	5,588,629
Barley malt	12,227	933,830	13,134	918,619	10,565	736,672
Oats	50,987	1,593,352	50,369	1,416,623	69,771	1,744,267
Bran and ship stuffs	562	11,234	566	11,111	147	2,940
Peas and beans	4,484	261,501	3,867	193,362	5,088	254,390
Apples	27,414	1,037,660	22,998	396,114	7,388	316,224
Potatoes	56,646	755,281	29,407	1,178,299	42,823	856,465
*Dried fruit	39	12,320	....	....	20	6,000
Total vegetable food	1,172,550	$14,414,134	905,768	$33,418,013	1,349,954	$44,105,388
All other agricultural products.						
*Cotton	124	$29,748	63	$14,620	75	$14,920
*Unmanufactured tobacco	43	17,260	38	28,842	....	....
*Hemp	2	564	....	....	....	....
*Clover and grass seed	304	54,648	....	....	1,502	390,630

STATEMENT No. 13 — (*Continued*).

ARTICLES.	1875.		1876.		1877.	
	Tons.	Value.	Tons.	Value.	Tons.	Value.
Flax seed	1,216	$243,100	146	$8,769	2,683	$54,393
*Hops	22	5,316	....	....	50	7,984
Total all other agricultural products	1,711	$350,636	247	$52,231	4,310	$467,927
Total agricultural products	1,175,495	$45,110,323	906,483	$33,619,217	1,362,700	$45,899,010
MANUFACTURES.						
*Domestic spirits	....	....	1	$164	33	$10,581
Oil meal and cake	1,833	$91,610	2,862	143,090	4,324	216,205
*Leather	129	66,548	57	28,600	12	6,125
Furniture	462	184,720	13	5,340	69	27,435
*Bar and pig lead	79	14,157	....	....	734	95,440
Pig iron	24,602	984,052	26,699	533,978	17,707	354,121
Bloom and bar iron	6,067	607,090	5,558	210,882	4,518	203.331
Castings and iron ware	301	42,266	4	728	303	48,520
*Domestic woolens	31	78,500	1	1,080	....	224
*Domestic cottons	224	128,460	....	....	48	25,362

Domestic salt	36,233	507,255	8,799	274,527	25,648	358,996
Foreign salt	248	3,968	244	3,904	155	2,481
Total manufactures	70,209	$2,708,626	44,268	$1,202,293	35,545	$1,348,821
Merchandise	8,341	$6,531,282	4,364	$2,280,788	5,341	$2,533,024
OTHER ARTICLES.						
*Live cattle, hogs and sheep	....	....	....	....	....	....
Stone, lime and clay	66,041	$1,320,817	69,776	$1,395,514	54,606	$1,032,822
Gypsum	817	3,354	251	1,504	373	2,235
Anthracite coal	52,501	315,009	58,080	232,247	144,819	362,048
Bituminous coal	125,356	1,002,854	102,925	617,544	96,182	577,087
Copper ore	123	66,420	....	....	....	....
Iron ore	233,288	3,266,019	161,323	1,935,874	228,609	2,349,320
Petroleum	....	....	....	....	....	....
Sundries	63,331	18,999,286	187,987	23,271,276	62,271	12,802,013
Total other articles	541,457	$24,973,759	580,342	$27,453,959	586,860	$17,125,525
Total	2,608,777	$89,447,518	2,426,182	$73,893,878	2,986,812	$76,787,713

* Articles marked thus were placed on the free list in 1877.

STATEMENT No. 13— (*Continued*).

ARTICLES.	1878.		1879.		1880.		1881.		1882.	
	Tons.	Value.	Tons.	Value.	Tons.	Value.	Tons.	Value.	Tons.	Value.
THE FOREST.										
*Fur and peltry	2	$9,000	....	....	......	....	....	....	......	....
Product of Wood.										
Boards and scantling	1,038,181	9,390,527	977,650	$9,971,970	1,137,903	$12,972,137	1,289,552	$15,474,628	1,315,060	$17,358,792
Shingles	3,820	229,307	1,718	41,205	825	23,096	1,566	43,855	1,605	57,780
Timber	16,374	269,036	16,262	292,716	24,380	438,840	27,334	273,340	30,025	300,253
†Staves	33,172	703,442	18,393	367,876	15,335	306,706	22,545	563,602	23,607	472,134
Wood	18,071	27,429	19 330	29,343	13,708	20,781	16,417	29,318	17,326	32,487
Ashes, pot and pearl	544	6,280	......	....	....	....	...	....	......	....
*Ashes, leached	....	....	10,617	44,237	10,056	41,900	10,524	43,851	10,193	40,773
Total of the forest	1,120,666	$10,728,412	1,043,970	$10,747,347	1,202,207	$13,803,460	1,367,938	$16,428,594	1,397,816	$18,262,219

AGRICULTURE.

Product of Animals.

*Pork	2,484	$117,740	336	$25,214	6,073	$607,254	....	....	11	$1,190
*Beef	....	....	....	....	16	1,100	....	....	....	....
*Bacon	....	....	....	....	....	....	....	....	....	....
*Cheese	356	64,080	51	12,192	....	....	13	$3,000	....	....
*Butter	13	4,233	9	4,700	....	....	2	1,148	....	....
*Lard, tallow and lard oil	177	28,240	17	1,964	4,779	812,505	3,301	610,759	1,678	570,452
*Wool	165	47,693	2	1,976	....	....	15	10,800	15	12,000
Hides	12	1,309	....	....	....	....	10	1,300	....	....
Total product of animals	3,207	$263,295	415	$46,046	10,868	$1,420,959	3,341	$627,007	1,704	$583,642

Vegetable Food.

*Flour	10,502	$93,391	404	$37,226	2,162	$140,119	428	$29,738	212	$14,768
Flour	1,421	78,996	....	....	....	....	....	....	....	....
Wheat	810,487	29,048,030	914,215	42,663,433	881,085	33,773,938	418,193	18,191,388	583,400	22,363,650
Rye	63,981	1,341,162	58,208	1,663,115	25,206	810,177	16,151	582,619	42,583	1,140,619
Corn	713,713	11,845,890	569,504	11,593,471	977,437	17,017,898	523,796	11,598,338	203,971	6,556,206
*Corn meal	....	....	76	2,100	155	1,656	....	....	....	....
Barley	82,089	3,579,076	78,990	3,620,406	96,351	3,653,236	72,471	3,019,581	78,575	2,946,562
Barley malt	13,997	649,779	9,182	705,158	11,706	757,460	13,508	913,789	12,844	815,950
Oats	82,510	1,722,395	19,957	498,919	16,031	370,720	29,295	842,212	20,901	600,931
Bran and ship stuffs	26	395	....	....	....	....	108	1,944	166	3,319
Peas and beans	4,939	179,887	3,147	188,800	3,320	166,294	2,831	141,550	5,760	431,993
Apples	21,355	214,737	14,942	398,780	16,500	275,000	4,498	164,942	2,211	81,081
Potatoes	34,325	808,676	29,124	388,319	30,529	508,817	31,945	798,615	21,975	549,378
*Dried fruit	44	8,800	....	....	9	2,760	115	45,900	25	10,000
Total vegetable food	1,828,887	$49,507,823	1,697,749	$61,759,727	2,060,491	$57,479,075	1,113,339	$36,330,616	972,623	$35,514 457

STATEMENT No. 13 — (*Continued*).

ARTICLES.	1878.		1879.		1880.		1881.		1882.	
	Tons.	Value.	Tons.	Value.	Tons.	Value.	Tons.	Value.	Tons.	Value.
All other Agricultural Products.										
*Cotton	362	$9,904	81	$18,000	4	$968	....	....	....	....
*Unmanufactured tobacco	....	....	2	540	....	....	....	....	....	....
*Hemp	....	....	4	21,135	....	....	....	....	6	$1,260
*Clover and grass seed	214	46,028	103	270	449	62,935	1,191	$198,533	182	29,040
*Flax seed	547	32,820	12,170	730,176	18,432	1,105,926	47,476	2,848,524	49,803	2,988,156
*Hops	49	11,748	15	11,324	39	13,141	....	....	....	....
Total all other agricultural prod'ts	1,172	$100,500	12,375	$781,445	18,924	$1,182,970	48,667	$3,047,057	49,991	$3,018,456
Total agricultural products	1,833,266	$49,871,618	710,539	$62,587,218	2,090,283	$60,082,904	1,165,347	$40,004,680	1,024,318	$39,116,555
MANUFACTURES.										
*Domestic spirits	27	$8,722	1	$260	....	....	....	....	1	$322
*Oil meal and cake	6,374	254,968	4,097	245,823	1,607	$56,247	2,111	$73,885	2,922	116,880
*Leather	73	30,156	47	23,875	....	....	....	....	....	....
Furniture	71	28,360	42	16,540	....	....	24	9,540	2	700
*Bar and pig lead	9	692	86	7,364	....	....	14	1,350	1	50
Pig iron	19,624	294,376	13,621	340,556	4,827	121,935	1,447	32,553	6,165	132,295
Bloom and bar iron	3,200	95,996	4,451	244,800	1,748	91,810	3,324	166,175	4,528	226,391
Castings and iron ware	391	54,886	6	875	218	39,177	111	19,980	120	21,645
*Domestic woolens	....	360	19	45,000	....	....	3	2,596	....	....
*Domestic cottons	633	253,066	242	146,150	1,058	528,975	825	330,120	1,075	430,160
Domestic salt	25,510	357,128	24,316	340,431	29,712	3,092,697	45,154	293,501	47,062	282,370
Foreign salt	196	3,120	....	....	227	5,111	....	....	....	....
Total manufactures	56,108	$1,381,804	46,928	$1,411,674	39,397	$3,935,952	53,013	$929,700	61,876	$1,201,813
Merchandise	7,367	$3,035,836	15,299	$10,448,506	30,264	$13,237,638	15,456	$5,691,638	24,154	$7,757,524

OTHER ARTICLES.										
‡Phosphates	....	....	....	... .	150	$5,250	1,924	$38,486	....	....
*Live cattle, hogs and sheep	....	....	....	....	....	....	....	....	....	....
Stone, lime and clay	110,907	$179,816	68,064	$136,128	78,630	786,300	83,750	837,494	122,493	$1,224,928
Gypsum	3,089	13,227	330	1,980	3,308	13,279	....	... .	.... .	....
Anthracite coal	107,590	319,206	19,743	62,214	45,042	327,365	1,203	5,414	561	2,368
Bituminous coal	107,601	645,600	61,627	316,220	66,438	671,278	47,649	282,231	60,983	243,933
Copper ore	....	....	....	....	....	....	....	....	....	....
Iron ore	185,673	1,856,735	272,311	1,362,561	307,110	1,612,331	317,136	1,585,680	338,775	2,032,649
Petroleum	26,303	493,166	6,667	152,400	....	....	....	....	....	....
Sundries	78,531	10,038,288	40,698	9,767,250	204,573	49,097,234	12,423	2,981,544	37,176	4,461,150
Total other articles	619,694	$13,546,040	469,440	$11,797,753	705,251	$52,513,037	464,485	$5,730,839	559,988	$7,965 028
Total	3,637,101	$78,563,710	3,286,176	$96,992,498	4,067,402	$143,572,991	3,065,839	$68,785,451	3,068,152	$74,303,139

*Articles marked thus were put on the free list in 1877. † Flour was placed on the free list Sept. 15, 1878. ‡ Placed on the free list in 1880.

(No. 14.)

STATEMENT of the tons of property going from tide-water, the coal and merchandise ascending the Erie and Champlain canals, from tide-water, and of the merchandise left on the several canals for a series of years.

YEARS.	Going from tide-water.	Coal ascending Erie and Champlain canals from tide-water.	MERCHANDISE.											
			Ascending Erie and Champlain canals from tide-water.	LEFT ON THE SEVERAL CANALS.										
				Erie.	Champlain.	Oswego.	Cayuga and Seneca.	Chemung.	Crooked Lake.	Chenango.	Genesee Valley.	Black River.	Oneida Lake.	Baldwinsville.
1826	35,435	......	31,437	......	......	......	......	......	......	......	......	......	......	......
1827	......	......	......	......	......	......	......	......	......	......	......	......	......	......
1828	56,792	......	53,278	......	......	......	......	......	......	......	......	......	......	......
1829	52,621	......	47,368	......	......	......	......	......	......	......	......	......	......	......
1830	70,154	......	63,929	......	......	......	......	......	......	......	......	......	......	......
1831	86,945	......	77,930	......	......	......	......	......	......	......	......	......	......	......
1832	......	......	......	......	......	......	......	......	......	......	......	......	......	......
1833	119,463	......	98,848	......	......	......	......	......	......	......	......	......	......	......
1834	114,608	1,102	86,814	......	......	......	......	......	......	......	......	......	......	......
1835	128,910	5,973	105,865	75,464	9,033	10,548	7,296	1,799	1,725	......	......	......	......	......
1836	133,796	5,436	117,889	79,275	11,359	14,511	7,686	2,895	2,163	......	......	......	......	......
1837	122,130	6,460	86,484	58,316	9,394	7,194	5,981	2,318	1,879	1,402	......	......	......	......
1838	142,808	6,472	117,949	81,832	12,033	8,995	7,755	2,256	2,619	2,459	......	......	......	......
1839	142,035	7,504	124,575	80,026	14,468	11,259	7,737	2,167	4,362	4,556	......	......	......	......
1840	129,580	6,053	105,960	68,499	12,926	7,611	7,386	1,556	3,057	3,709	1,216	......	......	......
1841	162,715	9,383	132,841	77,372	15,935	12,718	9,529	2,222	2,353	5,424	3,288	......	......	......
1842	123,294	7,714	94,213	59,925	10,395	9,245	6,760	1,210	1,137	3,082	2,459	......	......	......
1843	143,595	9,738	113,686	74,035	13,152	11,607	6,310	1,347	1,496	2,883	2,856	......	......	......
1844	176.737	14 039	135,616	82,784	14,644	20,322	7,475	1,496	1,794	3,697	3,404	......	......	......
1845	195,000	16,809	144,742	84,356	17.241	20,189	7,822	4,385	2,027	4,137	4,585	......	......	......
1846	213,395	17,599	163,125	96,026	19,444	22,547	9,202	4,177	2,151	4,555	4,853	......	......	......
1847	288,267	32,359	215.185	125,720	27,498	30,870	11,504	5,734	2,394	5,598	5,867	......	......	......
1848	329,557	39,592	242.661	144,744	32,893	35,851	5,363	4,539	2,246	11,176	5,849	......	......	......
1849	315,550	37,531	236,835	142,447	36,060	32,924	5,588	5.986	2,718	5,281	5,831	......	......	......
1850	418.370	46,722	252,545	151,782	31,778	48,865	2,964	1,723	2,338	2,849	10,246	......	......	......
1851	467,961	67,204	349,230	212,204	31,675	81,569	5,223	2,387	4,616	3,248	6,588	1,089	631	......
1852	521,527	69,923	396,087	251,490	30,284	82,793	8,479	6,080	3,951	3,673	7,516	1,159	662	......
1853	584,141	95,333	426,401	257,431	32,825	106,136	7,730	5,673	3,659	3,884	7,036	1,020	1,007	......
1854	531,831	92,806	371,912	256,142	22,792	74,192	3,251	2,580	1,034	5,571	4,610	1,103	491	146
1855	504,696	95,746	342,962	221,200	19,560	82,292	3,665	2,525	1,270	4,805	4,258	2,755	501	131

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	23,714	80,768	4,362	2,545	1,103	4,508	4,772	2,427	451	91
1857	340,176	116.211	188,160	110,439	21,888	47,529	2,668	1,070	531	2,404	926	550	155	......
1858	287,073	144,276	149,686	87,993	19,379	32,003	1,926	1,653	727	2,427	2,287	892	399	......
1859	317,459	142,495	169,664	101,460	22,344	32,744	3,851	2,363	585	3,994	1,220	942	161	......
1860	373,735	154,928	205,537	120,025	27,208	43,312	3,696	3,101	729	5,186	976	1,144	160	......
1861	340,736	170,795	117,601	68,852	19,192	20,268	2,954	1,332	339	3,314	508	697	154	......
1862	417,623	173,381	146,226	95,686	18,525	22.052	3,373	1,254	546	2,931	776	1,005	75	......
1863	456,800	232,807	155,394	100,679	14,637	30,926	1,600	1,606	468	3,768	592	1,093	25	......
1864	493,913	268,772	125,841	77,985	13,854	27,335	1,780	1,351	164	2,701	242	429	......	......
1865	458,684	249,414	125,279	90,866	20,449	14.331	559	1,693	157	2,468	299	657	......	......
1866	626,974	367,296	155,669	102 263	21,048	23,834	855	1,869	365	4,043	572	820	......	......
1867	792,573	463,932	185,641	114,772	21,515	41,100	837	1,894	237	4,168	293	825	......	......
1868	1,067,020	600,677	240,203	141,976	26,577	64,435	1,088	1,393	173	2,790	616	1,155	......	......
1869	722,201	434,624	235,169	139,484	21,298	65,986	802	1,098	200	4,929	817	555	......	......
1870	940,429	567,508	248,345	144,053	30,182	69,195	499	424	6	2,254	681	1,051	......	......
1871	801,538	392,158	266,660	170,544	32,670	58,077	509	768	369	950	1,682	1,091	......	......
1872	926,228	582,529	272,138	209,879	25,620	32,860	516	1,421	141	397	934	370	......	......
1873	795,117	591,677	148,033	100,115	25,288	18,361	1,803	652	239	253	791	531	......	......
1874	753,981	530,814	114,598	64,669	26,802	21,075	321	328	206	120	448	629	......	......
1875	701,253	509,567	94,397	46,365	35,377	11,007	246	250	......	71	302	779	......	......
1876	745,797	471,415	48,542	21,208	18,465	4,247	2,964	647	......	92	108	811	......	......
1877	978,991	847,332	70,393	33,116	21,497	14,388	678	9	......	......	99	606	......	......
1878	783,150	461.190	126,580	108,744	9,225	7,647	190	2	......	......	55	717	......	......
1879	992,434	525,049	205,654	182,325	6,541	14.783	1,439	......	......	......	......	566	......	......
1880	1,264,179	445,242	319,163	271,840	28,709	15,725	2,317	......	......	......	......	572	......	......
1881	1.056,196	499,712	351,352	320,169	24,947	6,236	......	......	......	......	......	......	......	......
1882	1,038,003	572,150	219,142	196,463	18,858	3,342	......	......	......	......	......	479	......	......

(No. 15.)

STATEMENT of tons from other States, by way of Buffalo, Black Rock and Tonawanda, Oswego, Rome and Whitehall, for a series of years.

YEARS.	PRODUCTS OF THE FOREST.			AGRICULTURE.		
	Buffalo, Black Rock and Tonawanda.	Rome and Oswego.	Whitehall.	Buffalo, Black Rock and Tonawanda.	Rome and Oswego.	Whitehall.
1836	3,755	1,645	49,951	31,761	16,239	3,977
1837	7,104	533	37,954	34,196	13,350	2,209
1838	4,615	4,616	29,882	62,568	10,404	3,460
1839	22,835	5,009	48,098	74,864	16,505	3,918
1840	18,133	3,108	43,861	117,813	16,787	3,574
1841	35,126	10,272	43,896	154,393	19,044	2,921
1842	26,229	6,840	22,783	160,338	25,570	3,376
1843	31,211	5,564	22,131	185,248	29,407	4,588
1844	52,061	16,027	21,652	184,988	51,167	6,457
1845	72,674	18,561	18,179	153,929	52,485	7,572
1846	61,957	25,053	24,942	325,262	84,849	6,800
1847	85,539	31,784	32,042	562,239	120,899	8,348
1848	102,883	39,550	21,253	372,671	116,807	3,775
1849	134,941	79,318	43,550	382,285	153,253	11,857
1850	205,622	122,440	102,013	431,624	150,186	13,491
1851	185,195	143,674	66,524	493,305	194,589	8,176
1852	195,879	141,013	81,432	546,141	232,676	23,168
1853	221,248	222,832	110,337	464,680	262,975	19,166
1854	203,080	174,597	104,034	524,801	152,894	4,404

1855	194,743	154,472	85,762	532,949	218,891	6,940
1856	169,275	166,522	69,339	511,723	344,424	15,580
1857	223,774	202,830	59,177	377,705	170,669	23,940
1858	186,045	205,094	62,803	559,213	274,716	25,830
1859	297,015	253,300	73,788	277,143	143,754	46,605
1860	333,101	314,604	56,498	797,188	379,813	41,637
1861	195,108	130,122	26,501	1,335,183	426,749	18,937
1862	363,728	199,618	34,785	1,580,638	387,803	33,714
1863	324,945	212,165	88,839	1,346,256	330,224	104,544
1864	411,411	243,439	142,533	1,001,826	188,566	47,660
1865	302,427	301,510	146,695	1,006,340	225,002	49,223
1866	377,958	328,427	206,535	1,158,956	266,279	10,702
1867	435,176	379,550	196,820	930,283	247,181	6,169
1868	496,097	394,974	182,145	929,064	254,752	8,044
1869	455,361	442,577	194,516	778,812	252,158	5,385
1870	508,464	454,335	227,795	787,027	220,263	10,343
1871	423,385	433,810	204,944	1,304,388	279,047	3,338
1872	453,774	431,704	254,885	1,293,717	169,818	2,676
1873	478,371	331,008	20,512	1,432,181	131,668	3,196
1874	440,765	278,844	182,922	1,157,668	243,325	5,475
1875	386,096	225,699	125,265	1,008,326	121,830	8,663
1876	319,019	174,976	120,407	778,409	96,670	5,020
1877	512,225	178,795	148,004	1,229,600	124,760	2,806
1878	502,860	157,775	149,349	1,638,296	89,997	390
1879	586,843	187,872	150,803	1,567,774	125,903	....
1880	636,851	273,527	199,874	2,094,098	132,380	5,621
1881	733,649	258,140	201,747	918,630	112,835	8,972
1882	785,861	308,131	191,459	906,173	121,840	20,770

NOTE — Black Rock office abolished in 1857.

STATEMENT No. 15 — (*Continued*).

YEARS.	MANUFACTURES.			OTHER ARTICLES.		
	Buffalo, Black Rock and Tonawanda.	Rome and Oswego.	Whitehall.	Buffalo, Black Rock and Tonawanda.	Rome and Oswego.	Whitehall.
1836	641	13	1,330	116	49	2,595
1837	454	17	1,077	475	126	2,306
1838	489	11	664	515	15	2,324
1839	801	....	894	438	419	3,398
1840	1,200	67	621	995	75	2,844
1841	3,696	6	1,105	1,535	104	2,987
1842	2,623	27	3,215	1,778	73	2,141
1843	2,026	51	2,506	2,751	118	1,901
1844	722	131	3,210	2,777	152	2,625
1845	2,414	151	3,838	6,118	211	3,800
1846	2,715	211	5,481	6,578	205	5,530
1847	5,431	77	3,807	6,757	114	6,280
1848	4,945	615	1,370	11,781	902	8,131
1849	5,865	291	1,050	11,995	721	9,014
1850	6,015	1,833	1,334	12,993	718	7,195
1851	13,271	1,186	828	13,711	1,089	5,163
1852	13,282	6,360	197	13,572	1,054	3,144
1853	15,407	9,750	25	17,158	1,640	81
1854	5,980	4,660	163	23,019	2,360	247
1855	7,106	2,433	704	17,910	6,859	9,522
1856	2,680	171	1,185	15,096	2,659	5,150
1857	7,006	3,072	2,522	22,431	2,511	6,563

1858	18,483	602	835	22,545	2,123	3,661
1859	8,544	54	....	49,315	7,419	2,524
1860	15,987	437	1,135	49,190	6,655	4,880
1861	17,800	448	....	49,802	3,213	7,655
1862	13,454	716	....	43,849	5,031	4,102
1863	16,714	582	....	39,167	9,199	4,733
1864	13,298	113	129	43,273	5,210	2,210
1865	7,895	9	233	49,114	11,859	6,180
1866	4,795	5	70	77,563	21,733	3,583
1867	3,821	3	22	103,215	29,633	3,623
1868	3,801	553	25	111,602	24,379	3,260
1869	2,002	152	1,613	124,427	13,228	2,364
1870	3,794	....	224	87,492	12,572	6,255
1871	2,235	....	1,691	109,403	6,149	2,076
1872	....	....	138	98,107	8,902	3,359
1873	....	....	....	94,796	56,720	4,176
1874	23	....	....	76,94[illegible]	9,031	5,125
1875	864	....	....	33,483	9,553	1,185
1876	151	....	....	22,959	10,570	2,766
1877	2,756	....	253	34,126	12,527	5,087
1878	507	....	....	69,375	2,255	1,342
1879	472	....	....	41,088	3,053	1,110
1880	1,584	....	....	29,250	3,901	17,019
1881	2,111	....	....	29,662	77	1,344
1882	465	....	....	25,586	235	1,193

NOTE — Black Rock office abolished in 1857.

STATEMENT No. 16.

THE TONS of the total movement of articles on all the canals, from 1837 *to* 1882, *both years inclusive, were as follows:*

YEARS.	Products of the forest.	Agriculture.	Manufactures.	Merchandise.	Other articles.	Total.
1837	618,741	208,043	81,735	94,777	168,000	1,171,296
1838	265,089	255,227	101,526	124,290	186,879	1,332,011
1839	667,581	266,052	111,968	132,286	257,826	1,435,713
1840, Genesee Valley canal opened	587,647	393,780	100,367	112,021	222,231	1,416,046
1841	645,548	391,905	127,896	141,054	215,258	1,521,661
1842	504,597	401,276	98,968	101,446	130,644	1,236,931
1843	687,184	455,797	124,277	119,209	126,972	1,513,439
1844	881,774	509,387	144,245	141,930	156,651	1,816,586
1845	916,976	555,160	160,638	151,450	228,543	1,977,565
1846	1,087,714	814,258	149,006	169,799	218,623	2,268,662
1847	1,086,880	1,092,946	176,448	221,890	287,812	2,869,810
1848	1,104,940	913,824	202,781	261,458	331,287	2,796,230
1849	864,373	1,020,259	203,990	255,455	310,088	2,894,732
1850	1,261,991	965,619	200,218	269,370	379,419	3,076,617
1851	1,393,698	1,125,264	222,529	365,404	475,838	3,582,733
1852	1,586,080	1,213,357	207,955	420,295	435,754	3,863,441
1853	1,821,525	1,150,924	230,036	458,327	587,041	4,247,853
1854	1,768,745	992,839	258,021	406,022	740,235	4,165,862
1855	1,534,934	1,047,344	281,873	374,402	784,064	4,022,617
1856	1,478,674	1,192,673	284,901	370,758	789,076	4,116,082
1857	1,364,002	767,370	232,803	222,954	756,932	3,344,061
1858	1,232,968	1,279,891	295,903	188,441	667,989	3,665,192
1859	1,542,035	816,784	299,421	211,182	912,262	3,781,684
1860	1,509,977	1,682,754	268,759	250,360	938,364	4,650,214
1861	1,052,392	2,144,373	280,256	135,096	895,518	4,507,635
1862	1,569,674	2,494,036	364,877	167,927	1,002,271	4,598,785
1863	1,628,688	2,236,075	319,432	172,278	1,201,219	5,557,692
1864	1,478,921	1,572,836	282,354	143,984	1,374,846	4,852,941
1865	1,467,315	1,696,091	281,832	154,968	1,129,448	4,729,654
1866	1,769,994	1,786,060	302,241	179,878	1,737,047	5,775,220
1867	1,744,252	1,438,517	320,844	319,880	1,964,832	5,688,325
1868	1,958,309	1,442,147	373,262	324,064	2,344,443	6,442,225
1869	1,855,930	1,314,071	342,239	268,970	2,077,870	5,859,080
1870	1,916,511	1,309,153	342,497	271,856	2,333,752	6,173,769
1871	1,941,297	1,863,868	336,288	288,428	2,038,007	6,467,888
1872	1,950,798	1,683,962	325,564	298,758	2,414,288	6,673,370
1873	1,582,072	1,750,418	267,820	172,990	2,591,482	6,364,782
1874	1,482,753	1,772,583	246,697	132,181	2,170,374	5,804,588
1875	1,250,546	1,311,613	275,731	110,141	1,911,827	4,859,858
1876	1,175,313	1,067,497	180,201	64,943	1,684,175	4,172,129

1877	1,312,526	1,522,317	184,218	83,010	1,853,892	4,955,963
1878	1,364,120	1,921,236	220,063	138,064	1,527,837	5,171,320
1879	1,368,849	1,850,347	255,303	237,071	1,650,802	5,362,372
1880	1,566,764	2,408,358	278,114	355,165	1,849,255	6,457,656
1881	1,652,543	1,171,400	250,961	325,775	1,778,513	5,179,192
1882	1,771,743	1,173,257	187,535	283,174	2,051,714	5,467,423
Total for 46 years	61,674,983	56,442,948	10,784,593	10,096,181	49,891,200	188,889,905
Yearly average	1,340,760	1,227,020	234,448	219,482	1,084,592	4,106,302
Per cent of each class	32.65	29.83	5.71	5.35	26.41	100.00
Average from 1837 to 1841—five years	636,921	303,001	104,698	120,886	210,239	1,375,745
Average from 1842 to 1846—five years	770,581	547,175	135,427	136,767	172,287	1,762,237
Average from 1847 to 1851—five years	1,187,045	1,023,582	201,193	275,315	376,889	3,044,024
Average from 1852 to 1856—five years	1,637,992	1,119,427	252,557	405,961	667,234	4,083,171
Average from 1857 to 1861—five years	1,340,275	1,338,234	275,428	201,607	834,213	3,989,757
Average from 1862 to 1866—five years	1,582,918	1,957,020	310,147	163,807	1,288,966	5,302,858
Average from 1867 to 1871—five years	1,883,260	1,473,551	343,026	274,640	2,151,781	6,126,258
Average from 1872 to 1876—five years	1,488,296	1,517,214	259,203	155,803	2,154,429	5,574,945
Average from 1877 to 1882—six years	1,506,091	1,674,486	229,365	237,043	1,785,336	5,432,321

STATEMENT No. 17.

THE VALUE of the total movement of articles on all the canals, from 1837 *to* 1882, *both years inclusive, were as follows :*

YEARS.	Products of the forest.	Agriculture.	Manufactures.	Merchandise.	Other articles.	Total.
1837	$6,146,716	$16,201,331	$6,390,486	$23,935,990	$3,134,766	$55,809,288
1838	6,338,063	19,390,714	5,915,856	31,594,692	2,507,234	65,746,559
1839	7,762,553	17,056,911	5,989,576	39,493,764	3,096,960	73,399,764
1840, Genesee Valley canal opened	4,609,035	18,644,481	4,719,054	35,636,943	2,694,379	66,303,892
1841	11,841,103	21,901,713	5,422,615	50,134,320	2,903,178	92,202,929
1842	5.957,219	16,987,843	4,435.289	30,042,153	2,594,104	60,016,608
1843	6,653,080	20,588,118	4,925,545	40,651.798	3,458,368	76,276,909
1844	7,422,737	23,379,643	6,151,806	49,224,099	4,742,867	90,921,152
1845	6,472,237	25,479.488	6,991,932	52.542,346	5,130,866	100,629,859
1846	6,422,409	35,820.586	7,015,311	62.004,488	4,349,315	115,612,109
1847	7,546.063	55,757,166	8,072.059	74,753,638	5.434,502	151,563,428
1848	7,219,350	42,850,086	7,433,957	76,945,463	5,637,301	140,086,157
1849	8.671,057	46,408,092	7,183,930	77,094,282	5,374,924	144,732,285
1850	15.117,661	46,152,958	7,933,108	81,135,199	6,059,003	156,397.929
1851	12,549.754	43,277,458	8,255.575	88,531,320	7,367,694	159,981,801
1852	11.526 436	49,437,555	6,294,120	122,624,170	6,721,236	196,603,517
1853	14,001,506	57,482,815	8,091,100	118,317,856	9,286,293	207,179,570
1854	14.384,785	51,980,864	9,796,420	123,167.863	10,954,380	210,284,312
1855	10,545,615	58,222,314	10,467,559	113,572,523	11,582,136	204,390,147
1856	10,211,383	51,030,453	10,308,419	135,691,816	11,084,991	218,327,062
1857	9,827,410	30,955,369	9,330,067	74,633,905	12,250,267	136,997,018
1858	8,963.443	50,142,318	9,352.955	61,236,319	8,873,809	138,568,844
1859	10,798,769	34,044,601	8,757,059	65,072,972	13,487,357	132,160,758
1860	10,654,710	55,838,977	8,113,177	84,252.425	11,989,909	170,849,198
1861	6,462.614	57,861,720	6,718,273	49,707,729	9,365,557	130,115,893
1862	11,305,954	84,239,370	12,314,651	83,640,903	11,733,453	203,234,331
1863	13,421,909	101,090,511	13,044,051	91.417,513	21,072,477	240,046,461
1864	22.589,060	116,051,564	22,582,718	80,391,550	32,785,747	274,400,639
1865	21,011,122	83,670,467	18,095,266	102,627,877	30,832,372	256,237,104
1866	28,754,821	86,610,934	18,389,992	100,169,211	37,038,718	270,963,676
1867	28,977,470	81,616,663	16,877,334	108,545,569	42,939.676	278,956,712
1868	24,039,591	76,383,656	17,298,574	131,786.764	55,793,344	305,301,929
1869	21,930,635	55,528,825	13,595.892	103,464,505	54,761,407	249,281,284
1870	22,266,184	49,231,912	10,777,897	94,852,914	54,707,269	231,836,176
1871	27,309,303	68,130,282	10,881,540	78,898,185	53,548,381	238,767,691
1872	35,599,734	49,541,259	7,059,547	93,997,415	34,115,366	220,913,321
1873	18,651.838	60,194,909	5,979,656	76,173,336	30,715,761	191,715,500
1874	17,840,356	64,344,898	7,094,531	64,477,540	42,916,997	196,674,322
1875	12,478,669	50,540,911	6,311,137	40,885,448	34,792,410	145,008,575
1876	11,132,966	32,439,857	3,375,119	31,069,375	35,073,062	113,090,379

1877	15,574,893	46,765,635	10,911,786	46,130,795	21,028,903	139,411,963
1878	12,703,074	52,261,813	17,834,755	70,433,563	29,021,323	182,254,528
1879	12.053,499	56,826,653	37,173,222	144,653,500	34,573,762	285,280,726
1880	14,351,622	68,994,218	14,236,227	109,870,264	40,392,459	247,844,790
1881	18,399,932	43,440.343	11,863,021	75,331,308	13,118,961	162,153,565
1882	20,285,512	42,766,687	4,673,440	61,769,417	18,423.851	147,918,907
Total for 46 years	$636,783,872	$2,321,564,941	$465,038,553	$3,552,585,106	$899,477,095	$7,876,449,567
Yearly average	$13,864,867	$50,468,803	$10,109,534	$77,230,111	$19,553,849	$171,227,164
Per cent of each class	8.09	29 48	5.90	45.11	11.42	100 00
Average from 1837 to 1841—five years	$7,339,494	$18,639,030	$5,687,517	$36,159,142	$2,887,303	$70,712,486
Average from 1842 to 1846—five years	$6,585,536	$25,251,135	$5,904,577	$46,892,975	$4,057,104	$88,691,327
Average from 1847 to 1851—five years	$10.220,777	$46,889,152	$7,755,726	$79,691,980	$5,974,685	$150,532,320
Average from 1852 to 1856—five years	$12,133,915	$53,330,800	$8,901,524	$122,674,846	$9,925,807	$207,357,922
Average from 1857 to 1861—five years	$9,341,389	$45,768,597	$8,454,306	$66,980,670	$11,193,380	$141,738,342
Average from 1862 to 1866—five years	$19,416,573	$94.332,569	$16.885,336	$91,649.411	$26,692,533	$248,976,442
Average from 1867 to 1871—five years	$24,904,641	$66,178.268	$13,886,247	$103,509,587	$52,350.015	$260,828,758
Average from 1872 to 1876—five years	$19.140,713	$51,412,367	$6,083,998	$61.320,623	$35,522,719	$173,480,200
Average from 1877 to 1882—six years	$15,394,755	$51,842,558	$16,115,409	$84,698,141	$26,093,216	$194,144,079

STATEMENT No. 18.

THE TOLLS paid on the total movement of articles and upon boats and passengers annually, from 1837 *to* 1882, *both years inclusive, were as follows:*

YEARS.	Boats and passengers.	Products of the forest.	Agriculture.	Manufactures.	Merchandise.	Other articles.	Total.
1837	$195,508	$211,118	$370,041	$75,507	$380,826	$56,430	$1,289,430
1838	210,457	229,998	468,495	74,941	526,911	75,555	1,589,357
1839	181,323	253,710	479,534	81,251	535,486	83,662	1,614,966
1840 Genesee Valley canal opened	185,022	197,904	808,623	75,765	427,966	80,467	1,775,747
1841	179,819	413,444	785,943	95,595	558.003	102.078	2,034,882
1842	165,515	211,979	805,376	70,611	393,875	101,840	1,749,196
1843	156,004	290.755	922,710	93,231	502,617	116,273	2,081,590
1844	191,878	363,547	1,009,773	123,061	585,147	172,968	2,446,374
1845	195.426	313,613	1,088,671	111,236	625.900	211,335	2,646,181
1846	223,669	354,888	1,439,793	81,288	546,227	110,241	2,756,106
1847	278,022	358,235	2,031,748	91,648	670,979	201,749	3,635,381
1848	240,341	367,494	1,602,995	112,355	779.420	149,607	3,252.212
1849	234,311	408,566	1,608,441	101,638	769,913	145,357	3,268,226
1850	240.493	512,066	1,492,639	99,116	756,877	172,705	3,273,896
1851	254,735	493,064	1,410,129	126,051	877,438	169,310	3,329,727
1852	251,859	455,123	1,491,840	115,334	674,881	129,207	3,118,244
1853	249,021	571,289	1,394,070	124,321	719,762	146,255	3,204,718
1854	226,128	519,466	1,080,409	123,425	638,039	186,099	2,773,566
1855	194,657	489,666	1,152,829	133,935	660,105	173,885	2,805,077
1856	193,997	399,655	1,293,807	120,462	585,891	154,400	2,748,212
1857	148,190	478,852	804.177	100,971	342,410	171,041	2,045,641
1858	158,478	479,576	1,065.920	103,398	159,439	143,943	2,110,754
1859	141,154	627,238	574,855	87,589	112,542	180,567	1,723,945
1860	199,479	657,624	1,588,777	87,956	223,885	251,876	3,009,597
1861	207,924	398,647	2,872,198	95,722	107,958	226,336	3,908.785
1862	261,283	699,433	3,704,792	161,556	117,444	244,435	5,188,943
1863	242,348	715,059	3,106,443	137,017	137,253	307,087	4,645,207
1864	215,546	872,423	2,246,352	147,747	117,692	384,222	3,983,982
1865	193,604	741,302	2,304,411	144,090	111,879	344,669	3,839,955
1866	228,468	940,688	2,524.650	153,372	131,021	458,440	4,436.639
1867	202,876	1,019,627	2,066,082	137,788	163,368	498,317	4,088,058
1868	189,297	1,075,437	2,029,053	146,694	206,395	599,687	4,246,563
1869	170,654	1,041,395	1,759,481	104,389	166,160	536,442	3.778,501
1870	174.825	917,556	957,227	73,159	132,155	356,656	2,611,578
1871	187,421	827,344	1,428,471	79,517	140,199	437,886	3,100,838
1872	196,094	874,585	1,472,890	71,581	160,703	296,558	3,072,411
1873	189,800	760,106	1,546,055	68,542	79,646	332,569	2,976,718
1874	160.355	718,427	1,373,013	61,914	60,110	263,252	2,637,071

1875	132,497	361,589	774,316	67,683	27,374	226,573	1,590,032
1876	116,791	388,463	597,585	39,721	14,233	183,201	1,340,004
1877	4,789	241,546	462,387	27,295	14,233	130,646	880,896
1878	....	229,555	606,825	32,818	25,075	99,075	993,348
1879	....	249,181	571,681	30,707	31,104	58,901	941,574
1880	....	259,148	746,986	36,842	44,611	67,832	1,155,419
1881	852	282,366	323,183	431	1,760	23,798	632,390
1882	937	302,329	322,144	1,006	2,099	27,311	655,826
Total for 46 years	$7,970,827	$23,575,076	$60,567,820	$4,233,286	$15,047,011	$9,593,743	$120,987,763
Yearly average	$173,279	$512,502	$1,316,692	$92,028	$327,109	$208,559	$2,630,169
Per cent of each class	6.59	19.49	50.06	3.49	12 44	7.93	100 00
Average from 1837 to 1841—five years	$190,426	$241,235	$582,527	$80,612	$485,838	$80,238	$1,660,876
Average from 1842 to 1846—five years	$186,498	$306,956	$1,053,265	$95,886	$530,753	$142,531	$2,315,889
Average from 1847 to 1851—five years	$249,380	$427,885	$1,629,190	$106,762	$770,925	$167,746	$3,351,888
Average from 1852 to 1856—five years	$223,132	$487,640	$1,282,590	$123,496	$655,736	$157,967	$2,929,961
Average from 1857 to 1861—five years	$171,045	$528,387	$1,381,185	$95,127	$189,246	$194,754	$2,559,744
Average from 1862 to 1866—five years	$228,250	$793,781	$2,777,310	$148,756	$123,058	$347,770	$4,418,925
Average from 1867 to 1871—five years	$185,011	$976,272	$1,648,063	$108,309	$161,655	$485,798	$3,565,108
Average from 1872 to 1876—five years	$159,107	$620,634	$1,152,772	$61,890	$68,413	$260,431	$2,323,247
Average from 1877 to 1882—six years	$1,096	$260,687	$505,534	$21,517	$19,814	$67,927	$876,575

STATEMENT No. 19.

TOTAL TONS of each class of articles that came to the Hudson river from the Erie canal from 1837 *to* 1882, *both inclusive, were as follows:*

YEARS.	Products of the forest.	Agriculture.	Manufactures.	Merchandise.	Other articles.	Total.
1837	181,644	145,718	8,350	356	51,438	387,506
1838	198,961	174,025	7,229	258	38,773	419,249
1839	185.728	155,082	6,686	405	38,366	386,267
1840	140,584	294,423	6,655	26	25,627	467,315
1841	237,520	265,920	12,778	142	16,160	532,520
1842	156,691	287,928	10,406	143	24,981	480,149
1843	239.585	338,968	23,542	134	33,116	635,345
1844	356,874	371,300	36,057	236	42,974	807.411
1845	420,190	430,454	43,184	206	65,556	959,590
1846	407,848	612.585	34,561	222	52,054	1,107,270
1847	445,975	875,365	25,755	690	83,467	1,431,252
1848	406,982	674.194	24,514	293	73,351	1,184,337
1849	442,106	736,009	24,340	205	64,064	1,266,724
1850	597,956	875,569	23,065	201	57,884	1,554,675
1851	552,345	856,127	29,872	247	70,086	1,508,677
1852	627,466	915,367	35,874	4,891	61,101	1,644,699
1853	835,304	895,672	37,098	6,302	77,062	1,851,438
1854	738,367	826,025	27,080	6,135	105,086	1,702,693
1855	569.080	753,277	23,159	9,400	65,799	1,420,715
1856	509,405	974,311	20,207	7,369	75,838	1,587,130
1857	503,428	516,755	23,825	8,115	65,076	1,117,199
1858	538,650	857,350	36,928	6,067	57,692	1,496,687
1859	776,855	505,004	23,518	5,176	140,780	1,451,333
1860	814,392	1,297,227	20,943	3,164	140,335	2,276,061
1861	429,324	1,871,723	24,406	1,358	122,798	2,449,609
1862	706,592	2,087.347	19,589	1,948	101,618	2,917,094
1863	682,215	1,809,911	25,944	2,674	126,945	2,647,689
1864	716,017	1,243,067	56.223	1,826	129,501	2,146,634
1865	627,089	1,302,711	33,896	1.181	113,484	2,078,561
1866	808,050	1,487,068	44.940	2,083	181,523	2,523,664
1867	837,581	1,099,983	50,020	1,934	236,594	2,226,112
1868	911,588	1,187,501	63,421	2,388	213,674	2,378,572
1869	873,431	1,055,932	67,267	1,947	259,112	2,257,689
1870	956,139	1,024,458	72,345	2,832	234.924	2,290,698
1871	816,802	1,539,243	78,177	2,747	211,908	2,648,877
1872	890,140	1,480,580	60,993	3,456	235,236	2,670,405
1873	925,535	1.396,236	29,237	4,587	219,760	2,585,355
1874	755,201	1,429,544	27,590	6,240	251,722	2,470,297

1875	490,000	1,133,622	51,786	1,769	237,765	1,914,942
1876	570,755	882,391	17,511	2,131	272,532	1,745,320
1877	623,788	1,336,884	33,493	3,474	300,369	2,298,008
1878	650,082	1,813,255	34,777	4,802	328,874	2,831,790
1879	682,670	1,692,385	29,336	12,586	129,025	2,546,002
1880	836,105	2,084.096	35,667	16,271	254.219	3,226.358
1881	903.080	1,137,107	47,722	9,508	95 885	2,193,302
1882	936,525	985,535	50,232	18,730	111,418	2,102,440
Total for 46 years	27,512,648	45,715,234	1,530,198	166,858	5,900,552	80,825,490
Yearly average	598,101	993,809	33,265	3,627	128,273	1,757,075
Per cent of each class	34.04	56.56	1.89	.21	7.30	100.00
Average from 1837 to 1841—five years	188,888	207,034	8,339	237	34,073	438,571
Average from 1842 to 1846—five years	316,238	408,252	28.025	188	43,731	796,434
Average from 1847 to 1851—five years	489,073	766,889	25,509	328	70,770	1,352,569
Average from 1852 to 1856—five years	655,924	872,930	28,684	6,820	76,977	1,641,335
Average from 1857 to 1861—five years	612,530	1,009,612	25,924	4,776	105,336	1,758,178
Average from 1862 to 1866—five years	707,993	1,586.021	36,118	1,942	130,614	2,462,688
Average from 1867 to 1871—five years	879,108	1,181.403	66,246	2,370	231,242	2,360,369
Average from 1872 to 1876—five years	706,326	1,264,474	39,424	3,637	243,403	2,257,264
Average from 1877 to 1882—six years	772,042	1,508,210	38,538	10,895	203,298	2,532,983

STATEMENT No. 20.

TOTAL TONS of each class of articles which came to the Hudson river from the Champlain canal from 1837 *to* 1882, *both inclusive, were as follows :*

YEARS.	Products of the forest.	Agriculture.	Manufactures.	Merchandise.	Other articles.	Total tons.
1837	203,373	5,751	1,774	38	13,339	224,275
1838	201,913	8,117	1,258	40	9,904	221,232
1839	191,992	8,703	1,879	94	13,193	215,861
1840	181,125	7,933	2,010	78	10,551	201,697
1841	211,575	4,320	5,113	13	20,793	241,814
1842	164,789	5,249	5,609	42	10,788	186,477
1843	176,588	7,172	5,951	67	11,738	201,516
1844	188,328	12,063	3,900	10	19,653	223,954
1845	187,740	17,173	6,628	47	33,765	245,353
1846	195,162	15,869	11,515	1,575	30,928	255,049
1847	220,138	22,352	25,777	4,141	40,623	313,031
1848	196,290	11,702	20,353	6,047	29,176	263,568
1849	223,441	33,591	19,948	5,668	30,574	313,222
1850	349,812	50,479	16,604	6,904	55,389	479,188
1851	360,923	35,293	22,430	4,333	45,495	468,474
1852	437,211	73,901	11,638	5,714	61,659	590,123
1853	504,957	36,517	15,719	6,331	90,835	654,359
1854	364,651	20,422	13,002	8,497	114,478	521,050
1855	308,725	29,327	21,685	6,159	108,982	474,878
1856	349,366	49,106	30,247	6,704	100,916	536,339
1857	295,558	45,139	31,786	8,872	118,633	499,988
1858	278,963	72,439	38,053	9,166	89,834	488,455
1859	346,752	105,313	39,561	10,628	168,085	670,339
1860	323,481	76,166	46,026	8,071	125,072	578,816
1861	261,262	62,524	18,668	7,047	181,034	530,535
1862	261,470	64,812	25,913	3,522	129,898	485,615
1863	367,344	88,342	30,324	2,449	138,579	627,038
1864	390,131	77,495	23,257	1,643	166,097	658,623
1865	424,527	76,620	24,315	3,121	123,237	651,820
1866	521,834	54,967	15,240	4,289	185,613	781,943
1867	521,706	43,729	27,230	3,262	207,656	803,583
1868	547,765	42,053	26,393	2,670	239,696	858,577
1869	579,988	31,173	17,356	3,175	206,761	838,453
1870	509,378	25,128	18,821	9,286	302,991	865,604
1871	531,177	32,511	16,734	4,856	261,646	846,924
1872	577,725	9,668	19,943	4,216	365,987	977,539
1873	382,936	25,233	7,184	7,504	368,437	791,294
1874	437,480	41,328	21,836	6,665	245,506	752,815

1875	323,275	41,873	18,423	6,572	303,692	693,835
1876	319.970	24,092	26,757	2,233	307,810	680,862
1877	354.578	25,816	20,052	1,867	286,491	688,804
1878	470,584	20,011	21,331	2,565	290,820	805,311
1879	361,300	18,154	17,592	2,713	340,415	740,174
1880	366,102	6,187	3,730	13,993	451,032	841,044
1881	464,858	28,240	5,291	5,948	368,200	872,537
1882	461,291	38,783	11,644	5,424	448,570	965,712
Total for 46 years	15,899,534	1,632,836	816,500	204,259	7,274,571	25,827,700
Yearly average	345,642	35,496	17,750	4,440	158,143	561,471
Per cent of each class	61.56	6 32	3.16	.79	28.17	100.00
Average from 1837 to 1841—five years	197,995	6,965	2,047	53	13,556	220,976
Average from 1842 to 1846—five years	188,522	10,570	6,721	348	21,374	227,535
Average from 1847 to 1851—five years	270,121	30,683	21,022	5,419	40,252	367,497
Average from 1852 to 1856—five years	392,982	41,854	18,478	6,681	95,374	555,369
Average from 1857 to 1861—five years	301,203	72,316	34,819	8,758	136,531	553,626
Average from 1862 to 1866—five years	393,062	72,448	23,810	3,005	148,682	641,007
Average from 1867 to 1871—five years	538,003	34,919	21,307	4,649	243,750	842,628
Average from 1872 to 1876—five years	408,277	28,439	18,829	5,438	318,286	779,269
Average from 1877 to 1882—six years	413,119	22,865	13,273	5,418	364,255	818,930

STATEMENT No. 21.

TOTAL TONS of each class of articles which came to the Hudson river from Erie and Champlain canal from 1837 *to* 1882, *both inclusive, were as follows:*

YEARS.	Products of the forest.	Agriculture.	Manufactures.	Merchandise.	Other articles.	Total tons.
1837	385,017	151,469	10,124	394	64,777	611,781
1838	400,877	182,142	8,487	298	48,677	640,481
1839	377,720	163,785	8,565	499	51,559	602,128
1840	321,709	302,356	8,665	104	36,178	669,012
1841	449,095	270,240	17,891	155	36,953	774,334
1842	321,480	293,177	16,015	185	35,769	666,626
1843	416,173	346,140	29,493	201	44,854	836,861
1844	545,202	383,363	39,957	246	62,627	1,031,395
1845	607,930	447,627	49,812	253	99,321	1,204,943
1846	603,010	628,454	46,076	1,797	82,982	1,362,319
1847	666,113	897,717	51,532	4,831	124,090	1,744,283
1848	603,272	685,896	44,867	6,343	107,527	1,447,905
1849	665,547	769,600	44,288	5,873	94,638	1,579,946
1850	947,768	926,048	39,669	7,105	113,273	2,033.863
1851	913,268	891,420	52,302	4,580	115,581	1,977,151
1852	1,064.677	989,268	47,512	10,605	122,760	2,234,822
1853	1,340,261	932,189	52,817	12,633	167,897	2.505,797
1854	1,103,018	846,447	40,082	14,632	219,564	2,223,743
1855	877,805	782,604	44,844	15,559	174,781	1.895,593
1856	858,771	1,023,417	50,454	14,073	176,754	2,123,469
1857	798,986	561.894	55,611	16,987	183,709	1,617.187
1858	817,613	929,789	74.981	15,233	147,526	1,985,142
1859	1,123,607	610,317	63,079	15,804	308,865	2,121,672
1860	1,137,873	1,373,393	66,969	11,235	265,407	2,854,877
1861	690,586	1,934,247	43,074	8,405	303,832	2,980,144
1862	968,062	2,152,159	45,502	5,470	231,516	3,402,709
1863	1,049,559	1,898,253	56,268	5,123	265,524	3,274,727
1864	1,106,148	1,320,562	79,480	3,469	295,598	2,805,257
1865	1,051,616	1,379,331	58,211	4,302	236,721	2,730,181
1866	1,329,884	1,542,035	60,180	6,372	367,136	3,305,607
1867	1,359,287	1,143,712	77,250	5,196	444,250	3,029,695
1868	1,459,353	1,229,554	89,814	5,058	453,370	3,237,149
1869	1,453.419	1,087,105	84,623	4,122	465,873	3,096,142
1870	1,465.517	1,049,586	91,166	12,118	537,915	3,156,302
1871	1,347,979	1,571,754	94,911	7,603	473,554	3,495,801
1872	1,467,865	1,490,248	80,936	7,672	601,223	3,647,944
1873	1,308,471	1,421,469	46,421	12,091	588,197	3,376,649
1874	1,192,681	1,470,872	49,426	12,905	497,228	3,223,112

1875	813,275	1,175,495	70,209	8,341	541,457	2,608,777
1876	890,725	906,483	44,268	4,364	580,342	2,426,182
1877	978,366	1,362,700	53,545	5,341	586,860	2,986,812
1878	1,120,666	1,833,266	56,108	7,367	619,694	3,637,101
1879	1,043,970	1,710,539	46,928	15,299	469,440	3.286,176
1880	1,202,207	2,090,283	39,397	30,264	705.251	4,067,402
1881	1,367,938	1,165,347	53,013	15,466	464,085	3,065,839
1882	1,397,816	1,024,318	61,876	24,154	559,988	3,068,152
Total for 46 years	43,412,182	47,348,070	2,346,698	371,117	13,175,123	106,653,190
Yearly average	943,743	1,029,306	51,015	8,068	286,416	2,318.548
Per cent of each class	40.70	44.40	2 20	0.35	12.35	100.00
Average from 1837 to 1841—five years	386,884	213,998	10,746	290	47,620	659,547
Average from 1842 to 1846—five years	498,759	418,823	34,746	536	65,105	1,017,969
Average from 1847 to 1851—five years	759,573	797,573	46,531	5,746	111,022	1,720,066
Average from 1852 to 1856—five years	1,048,194	914,785	47.142	13,500	172,351	2,196,685
Average from 1857 to 1861—five years	913,733	1,081,928	60,743	13,533	241,867	2,311,804
Average from 1862 to 1866—five years	1.101,054	1,658,468	58,728	4,947	279,299	3,102.496
Average from 1867 to 1871—five years	1,417,111	1,216.342	87,553	7.019	474.992	3,203,017
Average from 1872 to 1876—five years	1,134,603	1.292,913	58,252	9,075	561,690	3,056,533
Average from 1877 to 1882—six years	1,185,160	1,531,675	51,811	16,315	567,552	3,351,914

(No. 22.)

TOLLS collected on and applicable or belonging to each canal, in each year, up to 1882.

YEARS.	Erie canal.	Champlain canal.	Oswego canal.	Cayuga and Seneca canal.	Chemung canal.	Crooked Lake canal.	Chenango canal.
1823	$190,635 08	....	....	....	....	....	....
1824	294,546 62	$46,214 45	....	....	....	....	....
1825	492,664 23	73,615 26	....	....	....	....	....
1826	687,976 68	74,191 19	....	$3,022 95	....	....	....
1827	775,919 22	83,311 02	....	....	....	....	....
1828	727,650 20	107,757 08	$2,757 67	279 70	....	....	....
1829	707,883 49	87,171 03	9,439 44	8,643 49	....	....	....
1830	943,545 35	89,053 78	12,335 18	11,987 81	....	....	....
1831	1,091,714 26	102,896 23	16,271 10	12,920 39	....	....	....
1832	1,085,612 28	110,191 95	19,786 20	13,893 04	....	....	....
1833	1,290,163 19	132,572 12	23,015 84	17,174 91	$694 00	$300 81	....
1834	1,180,967 56	115,211 89	22,168 02	18,1[illegible] 43	3,378 05	1,473 40	....
1835	1,376,673 12	116,131 10	29,203 38	20,430 14	4,714 98	1,833 76	....
1836	1,440,539 87	115,425 24	30,469 83	20,523 43	5,06[illegible] 20	2,311 86	....
1837	1,144,170 21	94,726 31	21,092 92	15,968 47	4,331 60	1,521 15	$10,812 72
1838	1,414,174 21	104,125 15	27,372 38	18,397 47	4,394 67	2, 16 32	20,430 87
1839	1,427,031 53	113,753 69	34,162 42	18,747 47	5,187 27	1,721 31	15,778 33
1840	1,597,334 46	102,427 74	29,522 93	18,848 57	4,958 41	1,723 53	14,001 53
1841	1,813,650 58	117,841 14	38,344 22	23,583 37	9,396 42	2,017 32	18,815 48
1842	1,568,916 56	95,957 54	31,222 19	16,948 16	7,702 35	98[illegible] 39	13,615 38
1843	1,880,314 55	102,308 50	36,203 93	19,417 38	9,726 56	1,328 18	16,191 75
1844	2,190,147 34	116,739 32	56,161 93	24,618 17	14,285 13	1,497 89	22,177 96
1845	2,361,884 24	119,210 44	58,317 05	32,520 14	21,444 53	1,952 73	26,521 76
1846	2,499,275 58	108,094 67	58,185 43	27,282 11	13,503 44	1,912 81	23,492 86
1847	3,333,347 36	120,097 80	77,933 34	28,925 95	16,677 70	1,946 50	28,570 33
1848	2,947,881 76	117,500 66	79,793 22	28,814 20	16,191 25	1,821 70	32,272 80
1849	2.962,131 09	121,672 06	91,220 39	27,192 71	15,781 34	1,796 04	21,295 45
1850	2,933,125 93	133,969 43	98,528 42	26,739 87	15,997 74	1,696 95	19,908 72
1851	2,994,329,53	119,393 77	95,010 21	23,681 32	15,536 92	1,473 81	18,228 49
1852	2,799,849 88	114,591 51	83,690 42	22,266 70	15,848 44	1,363 01	16,695 86
1853	2,833,970 80	120,998 05	97,297 93	24,849 59	19,603 18	1,391 06	20,228 18
1854	2,465,686 47	103,522 88	62,784 33	23,535 76	21,152 32	956 04	19,964 01
1855	2,489,272 27	106,524 67	82,121 52	22,918 83	19,768 42	1,080 65	20,036 66
1856	2,398,860 36	111,229 15	109,883 11	20,462 31	17,117 52	1,034 85	20,231 61
1857	1,769,179 01	104,889 99	82,665 63	16,565 34	15,516 51	635 36	19,568 71
1858	1,838,835 64	96,936 75	87,783 74	16,022 59	14,623 39	683 16	15,886 39
1859	1,457.584 62	106,361 91	71,406 02	17,072 66	16,918 95	631 55	18,273 45
1860	2,648,295 89	125,108 80	134,832 19	20,927 35	16,968 35	781 11	23,802 31

1861	3,589,133 69	91,824 15	135,453 60	18,509 22	15,606 77	609 46	25,381 79
1862	4,792,535 96	118,337 85	157,911 25	24,600 84	20,235 22	876 13	23,819 70
1863	4,209,284 68	156,461 59	149,043 56	26,578 94	24,444 98	628 36	27,671 33
1864	3,583,981 79	163.086 68	119,897 86	28,059 93	23,848 81	373 10	26,338 97
1865	3,448,608 49	168,390 77	132,830 11	26,835 80	13,228 55	525 42	21,297 60
1866	3,966,522 52	193,609 21	151,347 82	33,059 86	18,191 70	670 11	30,286 50
1867	3,632,875 83	197,873 47	154,174 71	27,835 61	13,495 28	397 21	28,649 52
1868	3,768,209 14	199,757 35	164,627 97	34,146 44	10,557 02	331 31	28,648 61
1869	3,335,544 41	185,231 79	160,255 33	36,949 46	8,806 17	414 07	20,902 58
1870	2,270,347 43	154,051 39	111,232 87	23,030 53	4,872 11	306 14	14,832 91
1871	2,780,433 64	147,923 35	109,491 24	20,376 92	4,731 66	317 45	6,716 63
1872	2,749,400 67	173,541 54	88,704 48	19,266 25	4,269 75	193 82	3,986 73
1873	2,707,319 75	138,753 48	69,591 32	21,173 43	3,253 09	299 80	4,830 27
1874	2,377,762 50	135,571 46	74,205 56	17,123 80	3,316 39	194 00	4,521 31
1875	1,428,078 25	97,454 66	35,412 98	11,438 40	1,304 54	75 68	2,318 39
1876	1,167,226 56	88,157 48	28,846 94	10,974 35	3,380 33	....	3,241 01
1877	781,056 01	48,665 74	15,237 57	2,687 56	2,971 87	....	....
1878	913,765 37	46,290 24	11,012 84	2,908 39	1,919 56	....	....
1879	878,340 22	39,915 86	12,122 27	1,349 81	....	....	....
1880	1,074,529 65	50,694 52	15,600 88	1,401 72	....	....	....
1881	571,596 02	34,773 66	12,331 53	1,079 04	....	....	....
1882	587,858 76	37,819 08	15,102 20	1,276 86	....	....	....

STATEMENT No. 22—(*Continued*)

YEARS.	Genesee Valley canal.	Oneida Lake canal.	Seneca River towing-path.	Oneida River improvement.	Cayuga inlet.	Black River canal.	Baldwins-ville canal.	Total.
1823	....	....	....	....	....	....	....	$190,635 08
1824	....	....	....	....	....	....	....	340,761 07
1825	....	....	....	....	....	....	....	566,279 49
1826	....	....	....	....	....	....	....	765,190 82
1827	....	....	....	....	....	....	....	859,260 24
1828	....	....	....	....	....	....	....	838,444 65
1829	....	....	....	....	....	....	....	813,137 45
1830	....	....	....	....	....	....	....	1,056,922 12
1831	....	....	....	....	....	....	....	1,233,[illegible]01 98
1832	....	....	....	....	....	....	....	1,229,483 47
1833	....	....	....	....	....	....	....	1,463,820 98
1834	....	....	....	....	....	....	....	1,341,329 96
1835	....	....	....	....	....	....	....	1,548,986 48
1836	....	....	....	....	....	....	....	1,614,336 43
1837	....	....	....	....	....	....	....	1,292, 623 38
1838	....	....	....	....	....	....	....	1,590, 911 07
1839	....	....	....	....	....	....	....	1,616,383 02
1840	$6,930 40	....	....	....	....	....	....	1,775,747 57
1841	9,927 69	$462 02	$844 58	....	....	....	....	2,034,882 82
1842	13,204 11	462 63	149 51	....	....	....	....	1,749,197 52
1843	15,291 78	507 74	296 80	....	....	....	....	2,081,590 17
1844	19,641 20	621 45	381 13	....	....	....	....	2,446,374 52
1845	23,173 93	653 53	473 52	....	....	....	....	2,646,181 87
1846	23,448 57	542 80	368 10	$14 52	....	....	....	2,756,120 89
1847	26,707 25	624 74	372 96	176 07	....	....	....	3,635,380 00
1848	26,722 12	688 97	469 72	236 89	....	....	....	3,252,212 19
1849	25,567 42	821 06	274 82	239 71	$232 94	....	....	3,268,226 03
1850	27,675 95	3,683 62	270 42	9,483 14	189 14	$2,629 89	....	3,273,899 23
1851	26,817 07	7,593 84	226 15	23,658 95	175 03	3,661 91	....	3,329,727 00
1852	24,927 96	8,009 78	187 18	25,680 08	274 53	4,628 67	....	3,118,241 02
1853	31,239 71	11,571 67	111 12	37,630 47	263 17	4,698 71	$864 25	3,204,717 99
1854	30,907 78	9,040 48	244 92	29,508 91	320 43	5,880 07	61 95	2,773,566 35
1855	25,546 98	7,012 21	271 90	23,200 69	352 21	6,897 92	71 17	2,805,076 10
1856	22,831 56	9,318 42	277 92	31,163 86	352 71	5,385 05	60 24	2.748,211 67
1857	25,203 81	1,265 53	145 99	3,546 37	313 81	6,131 57	13 12	2,045,640 75
1858	27,913 34	1,565 79	138 37	4,871 96	177 88	5,294 15	20 67	2,110.753 82
1859	27,855 51	320 23	142 16	1,040 16	184 48	6,129 65	23 62	1,723,944 97
1860	30,232 68	287 97	187 81	886 80	143 63	6 113 52	28 63	3.009,597 04
1861	23,806 30	210 92	229 89	1,127 88	143 96	6,827 88	19 30	3,908,784 81
1862	35,921 70	70 96	527 70	3,908 57	318 52	8,834 18	44 56	5.188,943 14
1863	34,303 39	39 43	503 50	4,392 59	376 96	11,641 98	35 82	4,645,207 11

1864	24,033 83	....	375 36	2,481 22	304 23	11,200 05	....	3,983,981 83
1865	14,465 06	....	400 02	2,474 48	240 20	10,658 30	....	3,839,954 80
1866	25,979 88	....	392 07	3,286 42	287 94	13,003 27	....	4,436,639 30
1867	18,669 59	....	310 25	2,271 80	344 77	11,159 90	....	4,088,057 94
1868	26,169 08	....	342 42	2,142 83	642 58	10,988 81	....	4,246,563 56
1869	17,094 34	....	378 08	1,145 41	290 46	11,489 08	....	3,778,501 18
1870	19,172 74	....	171 05	786 24	258 40	12,515 87	....	2,611,577 68
1871	18,730 26	....	131 47	584 09	194 50	11,207 61	....	3,100,838 82
1872	20,514 13	....	222 05	798 52	423 20	11,090 58	....	3.072,411 72
1873	20,349 84	....	137 43	465 13	472 69	10,072 24	....	2,976,718 47
1874	13,016 88	....	95 66	432 89	306 51	10,523 96	....	2,637,070 92
1875	7,585 34	....	36 49	206 33	394 58	5,726 61	....	1,590,032 25
1876	21,022 81	....	149 07	499 13	324 75	10,180 87	....	1,340 003 30
1877	13,295 70	668 00	142 93	446 92	82 67	15,301 52	....	880,895 20
1878	6,266 37	1,621 00	33 67	130 80	125 21	10,879 72	....	993,348 38
1879	....	....	38 24	124 25	66 02	9,617 30	....	941,573 97
1880	....	....	29 73	328 80	73 74	12,759 80	....	1,155,418 84
1881	....	....	30 28	430 97	80 56	12,067 91	....	632,389 97
1882	....	....	29 91	341 53	92 29	13,305 37	....	655,826 00

(No. 23.)

TONS of merchandise going to other States by way of Buffalo, from 1860 to 1882, inclusive.

STATES, ETC.	1860.	1861.	1862.	1863.	1864.	1865.	1866.
Pennsylvania	1,439	706	861	899	535	420	147
Ohio	10,003	5,159	7,340	9,726	6,106	8,093	5,785
Michigan	13,509	6,476	7,137	6,414	4,782	5,406	4,874
Indiana	2,967	1,470	793	1,869	1,144	2,151	1,638
Illinois	24,386	12,108	24,118	21,024	25,842	24,575	41,287
Wisconsin	13,517	6,920	9,705	20,562	9,856	11,407	11,359
Kentucky	111	38	351	879	130	206	19
Missouri	2,284	706	1,685	1,245	1,680	1,281	1,407
Tennessee	18	....	....	....	....	20	....
Alabama	....	....	....	....	....	....	....
Minnesota	699	489	....	....	3,045	361	863
Iowa	1,355	834	850	1,371	3,991	1,992	808
Canada	842	332	105	135	227	3,263	188
	72,030	35,278	52,945	64,124	57,338	59,175	68,375

STATEMENT No. 23 — (*Continued*).

STATES, ETC.	1867.	1868.	1869.	1870.	1871.	1872.	1873.	1874.
Pennsylvania	331	9	12	206	174	821	73	32
Ohio	5,678	9,227	4,926	7,923	4,424	10,571	3,778	1,272
Michigan	12,885	8,232	8,339	4,072	4,215	15,299	10,743	2,095
Indiana	2,987	2,021	2,113	952	1,072	10,133	2,136	416
Illinois	44,589	48,884	47,891	51,161	54,574	40,315	26,916	23,416
Wisconsin	14,116	23,986	6,610	8,532	15,174	15,962	10,780	3,165
Kentucky	323	1,493	....	733	528	565	385	64
Missouri	892	2,775	3,163	10,610	14,727	19,284	1,404	430
Tennessee	....	....	....	....	....	....	....	....
Alabama	....	....	....	....	....	....	....	....
Minnesota	452	1,313	13,157	5,487	21,313	10,649	482	381
Iowa	783	1,428	4,552	6,510	6,377	4,460	518	673
Canada	9	191	....	....	....	18,354	364	115
	83,045	99,559	90,763	96,186	122,578	146,413	57,579	32,059

STATEMENT No. 23 — (*Continued*).

STATES, ETC.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.
Pennsylvania	90	....	354	999	2,219	....	....	4,211
Ohio	898	124	2,794	8,148	16,523	23,156	29,067	32,218
Michigan	6,296	67	3,151	3,699	3,730	17,684	13,485	4,596
Indiana	335	1	119	2,308	2,393	11,871	9,883	1,404
Illinois	5,431	2,341	11,281	41,684	80,358	72,484	156,403	78,998
Wisconsin	1,538	406	2,361	10,799	12,567	46,968	35,870	6,907
Kentucky	88	....	....	1,577	2,851	573	270	552
Missouri	121	....	....	11,816	19,988	13,882	29,013	3,064
Tennessee	....	....	....	....	....	....	....	21
Alabama	....	....	....	....	....	....	....	....
Minnesota	144	4	....	2,359	2,986	18,199	6,332	3,243
Iowa	674	20	266	2,308	3,818	17,382	15,500	2,165
Canada	11,752	307	....	....	185	....	....	26,069
	27,367	3,270	20,326	85,697	142,618	222,199	295,823	163,448

(No. 24.)

TONS arriving at tide-water, the produce of the State, by way of Erie canal, including the contributions of the lateral canals.

YEARS.	Products of the forest.	Agriculture.	Manufactures.	Merchandise.	Other articles.	Total.
1836	208,779	117,870	10,152	....	28,105	364,906
1837	174,007	98,172	8,027	208	50,839	331,251
1838	189,733	101,053	7,004	200	38,243	336,233
1839	157,084	63,713	6,445	303	37,509	265,054
1840	119,343	159,823	5,761	....	24,587	309,514
1841	192,122	92,483	9,603	100	14,521	308,829
1842	125,622	102,030	8,123	100	23,130	259,005
1843	202,810	124,313	21,720	100	30,247	379,190
1844	288,787	135,289	35,204	203	39,933	499,416
1845	328,955	224,032	40,619	157	61,276	655,039
1846	320,838	202,474	31,635	174	45,319	600,440
1847	328,652	192,227	20,247	666	76,620	618,412
1848	264,549	184,716	19,090	160	65,668	534,183
1849	227,847	200,471	18,410	....	51,348	498,076
1850	314,410	406,101	15,283	111	44,912	780,817
1851	270,840	199,775	15,502	66	55,501	541,684
1852	290,574	136,549	14,232	3,821	47,545	492,721
1853	391,224	168,017	15,260	4,785	58,462	637,748
1854	357,690	148,327	16,440	4,213	79,707	606,377
1855	220,865	1,337	13,620	8,700	41,030	285,552
1856	173,608	118,164	18,069	6,656	58,083	374,580
1857	66,824	... ...	14,468	7,394	40,134	128,820
1858	147,511	23,421	17,843	1,789	33,024	223,588
1859	226,450	84,167	14,920	3,305	85,917	414,699
1860	166,687	120,226	15,135	....	84,490	386,538
1861	104,094	109,791	6,412	1,108	69,783	291,188
1862	143,246	118,906	5,419	881	53,805	322,257
1863	145,105	133,431	8,648	2,256	78,997	368,437
1864	61,167	52,675	42,812	1,292	81,552	239,498
1865	23,152	71,369	25,992	667	53,025	174,205
1866	101,665	61,833	40,140	1,355	82,955	287,948
1867	22,855	......	46,196	1,521	104,156	174,728
1868	20,517	3,685	60,015	1,440	77,693	163,350
1869	15,493	24,962	65,270	1,939	121,457	229,121
1870	18,340	17,168	68,551	2,832	134,860	241,751
1871	....	.... .	75,942	2,747	96,356	175,045
1872	4,662	17,045	60,993	3,456	128,227	214,383
1873	116,156	....	39,237	2,263	68,244	225,900
1874	35,592	28,551	27,567	6,238	171,985	269,933
1875	...	3,466	51,223	1,468	194,729	250,886
1876	76,760	7,312	17,360	2,117	239,003	342,552
1877	....	... ...	30,737	3,474	253,716	287,927
1878	....	85,143	34,270	4,802	257,244	381,459
1879	95,827	124,611	28,864	12,586	87,937	349,825
1880	111,007	103,897	33,310	16,271	160,591	425,076
1881	85,417	165,524	45,601	8,911	83,729	389,182
1882	70,605	41,997	50,232	18,730	96,747	278,311

(No. 25.)

TONS arriving at tide-water by way of the Erie canal, the produce of Western States and Canada.

YEARS.	Products of the forest.	Agriculture.	Manufactures.	Merchandise.	Other articles.	Total.
1836	5,400	48,000	632	22	165	54,219
1837	7,637	47,546	323	148	601	56,255
1838	9,231	72,972	225	58	530	83,016
1839	28,644	91,369	241	102	857	121,213
1840	21,241	134,600	894	26	1,040	157,801
1841	45,398	173,437	3,175	42	1,639	223,691
1842	31,069	185,898	2,283	43	1,851	221,144
1843	36,775	214,655	1,822	34	2,869	256,155
1844	68,087	236,011	853	33	3,041	308,025
1845	91,235	206,422	2,565	49	4,280	304,551
1846	87,010	410,111	2,926	48	6,735	506,830
1847	117,323	683,138	5,508	24	6,847	812,840
1848	142,433	489,478	5,424	136	12,683	650,154
1849	214,259	535,538	5,930	205	12,716	768,648
1850	283,546	469,468	7,782	90	12,972	773,858
1851	281,505	656,352	14,370	181	14,585	966,993
1852	336,892	778,818	21,642	1,070	13,556	1,151,958
1853	444,080	727.655	21,838	1,517	18.600	1,213,610
1854	380,677	677,698	10,640	1,922	25,379	1,096,316
1855	348,215	751,940	9,539	700	24,769	1,135,103
1856	335,797	856,147	2,138	713	17,755	1,212,530
1857	436,604	516,755	9,357	721	24,942	988,339
1858	391,199	833,929	19,085	4,278	24,668	1,273,059
1859	550,405	420,897	8,598	1,871	54,863	1,036,634
1860	647,705	1,177,001	5,808	3,164	55,845	1,889,523
1861	325,230	1,761,932	17,994	250	53,015	2,158,421
1862	563,346	1,968,441	14,170	1,067	47,813	2,594,837
1863	537,110	1,676,480	17,296	418	47,948	2,279,212
1864	654,850	1,190,392	13,411	534	47,949	1,907,136
1865	603,937	1,231,342	7,904	514	60,459	1,904,156
1866	706,385	1,425,235	4,800	728	98,568	2,235,716
1867	814,726	1,099,983	3,824	413	132,438	2,051,384
1868	891,071	1,183,816	3,406	948	135,981	2,215,222
1869	857,938	1,030,970	1,997	8	137,655	2,028,568
1870	937,799	1,007,290	3,794	......	100,064	2,048,947
1871	816,802	1,539,243	2,235	....	115,552	2,473,832
1872	885,478	1,463,535	....	....	107,009	2,456,022
1873	809,379	1,396,236	....	2,324	151,516	2,359,455
1874	719,609	1,400,993	23	2	79,737	2,200,364
1875	490,000	1,130,156	563	301	43,036	1,664,056
1876	493,995	875,079	151	14	33,529	1,402,768
1877	623,788	1,336,884	2,756	......	46,653	2,010,081
1878	650,082	1,728,112	507	....	71,630	2,450,331
1879	586,843	1,567,774	472	....	41,088	2,196.177
1880	725,098	1,980,199	2,357	....	93,628	2,801,282
1881	817,663	971,583	2,121	597	12,156	1,804,120
1882	865,920	943,538	....	....	14,671	1,824,129

(No. 26.)

THE QUANTITY of wheat and flour shipped at Buffalo, Oswego and Whitehall, from the year 1835 *to* 1882; *at Black Rock from* 1839 *to* 1856, *inclusive; and at Tonawanda, from* 1850 *to* 1882. *inclusive, were as follows:*

YEARS.	BUFFALO.		BLACK ROCK.		TONAWANDA.		OSWEGO.		WHITEHALL.		TOTAL.	
	Flour, bbls.	Wheat, bush.	Flour. bbls.	Wheat, bush.	Flour, bbls.	Wheat, bush.	Flour, bbls.	Wheat, bush.	Flour, bbls.	Wheat, bush.	Flour. bbls.	Wheat, bush.
1835	100,883	168,012	....	....	....	....	123,421	51,962	140	....	224,444	219,974
1836	139,178	304,090	....	....	....	....	94,667	112,224	63	11,547	233,909	427,858
1837	126,815	450,350	....	....	....	....	66,002	10,025	....	107	192,827	460,482
1838	277,620	933,117	....	....	....	....	76,098	59,710	....	....	353,718	992,827
1839	288,168	965,000	69,278	7,156	....	....	110,390	106,210	....	10	467,836	1,078,376
1840	639,633	883,100	109,987	31,534	....	....	116,300	83,839	....	....	865,920	1,003,473
1841	648,686	1,207,135	179,268	182,783	....	....	128,094	94,779	10	....	956,058	1,384,697
1842	654,429	1,228,120	109,673	39,672	....	....	118,027	53,022	....	....	882,129	1,320,814
1843	880,868	1,699,724	111,327	28,620	....	....	209,269	108,564	4	28	1,201,468	1,835,936
1844	851,180	1,786,104	127,702	62,558	....	....	346,959	160,699	....	58	1,325,842	2,009,419
1845	721,891	1,354,996	153,795	18,790	....	....	379,383	119,572	....	656	1,255,069	1,494.014
1846	1,291,233	3,613,569	146,761	23,797	....	....	471,318	433,446	26	165	1,909,338	4,076,977
1847	1,903,351	5,816,362	165,335	20,368	....	....	610,494	713,531	2,477	2,575	2,681,657	6,552,836
1848	1,241,870	3,973 440	153,794	92,201	....	....	614,837	800,295	181	....	2,010,682	4,865,836
1849	1,034,938	3,940,350	181,565	86,242	....	....	808,307	1,003,462	18,579	868	2,043.389	4,090,922
1850	984,430	3,304,697	187,958	131,916	74,990	190,549	804,746	1,552,012	25,741	80	2,074,685	5,179,256
1851	1,106,352	3,669,005	214,647	75,827	170.181	162,069	888,131	1,676,213	8,418	7	2,387,729	5,582,121
1852	959,114	4,759,281	237,866	254,8 7	221,484	364,947	881,645	2,907,199	52,303	288,894	2,352,412	8,475,178
1853	658,364	4,958,818	247,587	232,176	214,890	382,953	853,956	4,513,513	50,045	155,877	2,024,842	10,243,337
1854	288,124	2,811,687	112,135	26,822	44,405	11,711	306,277	1,329,885	26,716	274	777,656	4,180,379
1855	235,578	6,455,641	99,017	43,982	7,960	79,839	398,657	2,698,377	10,642	2,917	751,854	9,280,756
1856	76,476	7,497,999	30,675	26,291	76	16,456	395,523	5,994,209	2,115	855	504,865	13.535,810
1857	88,092	6,673,827	....	....	27,924	36,018	254,621	2,572,429	48,617	33,485	419,254	9,315,759
1858	771,602	8,294,690	....	....	41,754	118,056	467,886	4,071,391	269	4,687	1,281,511	12,488,824
1859	220,486	6,168,068	....	....	6,362	274,305	253,510	2,198,882	5,121	....	485,979	8,641,255
1860	180,853	13,951,453	....	....	9,681	962,358	421,032	6,786,606	302	....	611,868	21,700.422
1861	306,236	23,713,714	....	....	22,873	270,038	433,546	7,695,262	500	350	763,155	31,679,363
1862	451,814	27,751,786	....	....	2,121	64,844	499,825	7,408,513	2,591	....	956,361	35,225,143
1863	469,792	19,404,308	....	....	42,640	52,513	374,593	6,061,611	462	....	887,487	25.518,432
1864	126,820	16,138,386	....	....	156,456	19,600	263,672	3,129,648	1,534	....	548,482	19,287,634
1865	142,018	10,202,141	....	....	135	48,486	277,814	2,678,667	3,723	60,236	423,690	12,979,530
1866	52,325	7,772,217	....	....	143	56	156,791	2,190,335	502	501	309,761	9,963,109
1867	15,468	10,109,718	....	....	1,282	7,012	74,761	2,511,131	19	....	91.530	12,628.061
1868	5,774	10,369,030	....	....	1,316	63,606	46,741	3,558,231	....	....	53,831	13,790,867
1869	51,928	16,463,480	....	....	5	364	68,161	4,711,984	126	....	120,220	21,075,828
1870	76,471	16,738,613	....	....	....	....	105,925	3,857,727	27	....	182,423	20,596,340

No. 26 — (*Continued*).

YEARS.	BUFFALO.		BLACK ROCK.		TONAWANDA.		OSWEGO.		WHITEHALL.		TOTAL.	
	Flour, bbls.	Wheat, bush.	Flour, bbls.	Wheat, bush.	Flour bbls.	Wheat, bush.	Flour, bbls.	Wheat, bush.	Flour, bbls.	Wheat, bush.	Flour, bbls.	Wheat, bush.
1871	47,731	19,028,316	....	....	4,200	....	92,997	4,105,784	....	....	144,928	23,134,100
1872	5,172	11,001,069	....	....	6	2,000	44,202	1,928,850	....	....	49,380	12,931,919
1873	13,616	21,569,088	......	....	60	3,137	37,241	1,775,398	....	....	50,917	26,347,623
1874	49,182	21,672,048	....	....	5	2,050	41,902	3,609,627	50	....	91,139	25,283,725
1875	54,250	23,177,166	....	....	....	....	16,000	1,089,666	417	....	70,667	24,266,832
1876	2,139	12,577,233	....	......	....	....	8,955	729,666	......	....	11,094	13,306,899
1877	4,316	13,270,420	....	....	11,626	10,084	8,889	965,169	....	....	24,831	14,245,673
1878	2,805	25,833,866	....	....	6,398	31,233	12,907	805,700	....	....	22,110	26,670,799
1879	4,750	29,708,699	....	......	7,258	38,124	6,797	858,015	231	....	19,036	30,604,838
1880	19,886	29,877,017	.....	......	5.505	43,094	8,808	582,188	....	....	34,199	30,502,299
1881	4.348	12,886,762	......	....	9,459	50	7,023	845,070	.....	....	20,830	13,731,882
1882	7,567	19,506,566	....	....	163	7,750	7,531	675,811	166	2,088	15,427	20,192,215

(No. 27.)

The total miles run in each year, by all the boats, is as follows:

YEAR.	Packet.	Freight boats.	Total miles.
1837	405,050	5,556,950	5,962,000
1838	400,250	5,126,800	6,527,050
1839	290,900	5,785,850	6,076,750
1840	258,880	5,952,300	6,212,180
1841	322,860	7,103,580	7,426,410
1842	354,300	6,173,200	6,527,500
1843	381,820	6,586,700	6,968,520
1844	427,740	7,841,750	8,268,490
1845	420,540	7,924,250	8,344,790
1846	414,340	9,065,450	9,479,790
1847	443,080	11,733,250	12,176,330
1848	542,300	9,633,850	10,176,150
1849	305,760	10,153,350	10,459,110
1850	343,475	10,718,100	11,061,575
1851	202,150	11,926,950	12,133,100
1852	71,775	12,306,950	12,378,675
1853	64,650	12,327,050	12,373,700
1854	24,675	11,244,200	11,268,875
1855	28,875	9,671,450	10,700,325
1856	21,175	9,656,700	9,677,875
1857	16,950	7,347,850	7,391,800
1858	18,775	7,886,100	7,904,825
1859	22,625	7,010,750	7,033,375
1860	21,150	9,930,300	9,951,450
1861	22,300	10,351,350	10,373,650
1862	20,450	13,021,950	13,042,400
1863	71,050	11,974,550	12,045,600
1864	13,950	10,748,650	10,762,600
1865	51,200	9,576,750	9,627,950
1866	23,025	11,376,400	11,399,425
1867	21,000	10,101,400	10,122,400
1868	30,050	9,403,400	9,433,450
1869	133,425	8,263,650	8,397,075
1870	14,925	8,674,550	8,689,475
1871	12,950	9,345,150	9,358,100
1872	12,200	9,780,300	9,792,500
1873	4,550	9,480,900	9.485,450
1874	5,775	8,004,850	8,010,625
1875	2,725	6,618,450	6,621,175
1876	7,575	5,823,200	5,830,775
1877	....	7,019,615	7,019,615
1878	....	8,459,551	8,459,551
1879	....	8,226,947	8,226,947
1880	....	10,400,931	10,400,931
1881	....	6,666,980	6,666.980
1882	....	6,816,795	6,816.795

(No. 28.)

STATEMENT of the tons of property going from tide water, the tons arriving at tide water from Western States and from this State, the total tons arriving at tide water, the tons of the internal trade of this State, and the tons of the total movement on all the canals, from 1836 *to* 1882.

YEAR.	Going from tide water.	ARRIVING AT TIDE WATER.				Total arriving at tide water.	Internal movement of this State.	Total movement.
		BY WAY OF ERIE CANAL.		BY WAY OF CHAMPL'N CANAL.				
		From Western States.	From this State.	From Verm't and Canada.	From this State.			
1836	133,796	54,219	364,906	53,853	223,369	696,347	480,666	1,310,807
1837	122,130	56,255	331,251	43,546	180,729	611,781	437,385	1,171,296
1838	142,808	83,233	336,016	36,330	184,902	640,481	549,722	1,333,011
1839	142,035	121,761	264,596	56,308	159,553	602,128	691,550	1,435,713
1840	129,580	158,148	309,167	50,900	150,797	669,012	617,454	1,416,046
1841	162,715	224,176	308,344	50,909	190,905	774,334	584,612	1,521,661
1842	123,294	221,477	258,672	30,515	155,962	666,676	447,011	1,236,931
1843	143,595	256,376	378,969	32,126	169,390	836,861	532,983	1,513,439
1844	176,737	308,025	491,791	33,974	185,304	1,019,094	620,755	1,816,586
1845	195,000	304,551	655,039	33,389	211,964	1,204,943	577,622	1,977,565
1846	213,815	506,830	600,440	41,852	213,196	1,362,319	692,528	2,268,662
1847	288,267	812,840	618,412	51,377	261,654	1,744,283	837,260	2,869,810
1848	329,557	650,154	534,183	34,528	229,040	1,447,905	1,018,768	2,796,230
1849	315,550	768,659	498,065	65,471	247,751	1,579,946	999,236	2,894,732
1850	418,370	841,501	530,358	124,033	355,155	2,033,863	624,384	3,076,617
1851	467,961	1,045,820	462,857	80,656	387,818	1,977,151	1,137,621	3,582,733
1852	521,527	1,151,978	492,726	107,941	482,182	2,334,828	1,107,087	3,863,441
1853	584,141	1,213,690	637,748	129,609	524,750	2,505,787	1,157,914	4,247,852
1854	531,831	1,094,391	602,167	108,848	412,202	3,223,743	1,410,288	4,165,862

1855	504,696	1,092,876	327,839	99,928	374,950	1,895,593	1,622,328	4,022,617
1856	573,733	1,212,550	374,580	91,254	445,085	2,123,469	1,418,880	4,116,082
1857	340,176	1,019,998	197,201	92,207	407,781	1,617,187	1,386,698	3,344,061
1858	287,073	1,273,099	223,588	93,069	395,386	1,985,142	1,392,977	3,665,192
1859	317,459	1,036,634	414,699	122,917	547,422	2,121,672	1,342,553	3,781,684
1860	373,735	1,896,975	379,086	104,150	474,666	2,854,877	1,421,602	4,650,214
1861	340,736	2,158,425	291.184	53,096	477,442	2,980,144	1,186,755	4,507,535
1862	417,623	2,594,837	322,257	72,601	413,014	3,402,709	1,778,453	5,598,785
1863	456,800	2,279,252	368,437	198,116	428,922	3,274,727	1,826,165	5,557,692
1864	493,913	1,907,136	239,498	195,532	466,091	2,805,257	1,553,771	4,852,941
1865	458,684	1,904,156	174,205	202,331	449,489	2,730,181	1,540,789	4,729,564
1866	626,974	2,235,716	287,948	220,890	561,053	3,305,607	1,842,639	5,775,220
1867	792,573	2,129,405	96,707	206,634	596.949	3,029,695	1,866,057	5,688,325
1868	1,067,020	2,215,222	163,350	193,474	668,760	3,240,806	2,134,399	6,442,225
1869	772,201	2,028,568	229,121	203.876	634,577	3,096,142	1,990,737	5,859,080
1870	940,429	2,048,947	241,751	244,617	620,987	3,156,302	2,077,038	6,173.769
1871	801,538	2,473,832	175,045	212.054	634,870	3.495,801	2,170,549	6,467.888
1872	926,228	2,456,022	214,383	261,058	716,481	3,647,944	2,099,198	6,673,370
1873	795,117	2.359,455	225,900	27,895	763,399	3,376,649	2,193,016	6,364,782
1874	753,981	2,200,364	269,933	193,523	559,292	3,223,112	1.827,495	5,804,588
1875	701,253	1,664,056	250,886	135,115	558,720	2,608,777	1,549,828	4,859,858
1876	745,797	1,402,768	342,552	128,223	552,639	2,426,182	1,000,150	4,172,129
1877	978,991	2,010,081	287,927	156,150	532,654	2,986,812	990,160	4,955,963
1878	783,150	2,450,512	381,278	151,081	654,230	3,637,101	751,069	5,171,320
1879	992,434	2,196,177	349,825	151,913	588,261	3,286,176	1,083,762	5,362.372
1880	1,264,179	2,801,282	425,076	224,437	616.607	4,067,402	1,126,075	6,457,656
1881	1,056,196	1,804,120	389,182	212,179	660,358	3,065,839	1,057,157	5,179,192
1882	1,038,003	1,824,129	278,311	213,422	752,290	3,068,152	1,361,268	5,467,423

(No. 29.)

THE FOREST.

STATEMENT of the tons arriving at tide water from Western States and from this State, the total tons arriving at tide water, the tons of the internal trade of this State, and the tons of the total movement on all the canals from 1836 *to* 1882.

YEAR.	ARRIVING AT TIDE WATER.				Total arriving at tide water.	Internal move't of this State.	Total movement
	BY WAY OF THE ERIE CANAL.		BY WAY OF CHAMPLAIN CANAL.				
	From Western States and Canada.	From this State, E. and lateral canals.	From Vermont and Canada.	From this State.			
1836	5,400	208,779	45,951	213,538	473,663	281,589	755,252
1837	7,637	174,007	37,954	165,419	385,017	233,694	618,711
1838	9,231	189,733	29,882	172,031	400,877	264,212	665,089
1839	28,664	157,075	48,098	143,894	377,711	289,870	667,581
1840	21,241	119,352	43,861	137,264	321,718	265,929	587,647
1841	45,398	192,122	43,896	167,679	449,095	196,453	645,548
1842	31,069	125,623	22,783	102,006	321,481	183,116	504,597
1843	36,775	202,810	22,131	154,457	416,173	271,011	687,184
1844	68,088	288,986	21,652	166,676	545,202	319,171	864,373
1845	91,235	328,955	18,179	169,651	607,930	273,844	881,774
1846	87,010	320,838	24,042	171,120	603,010	313,966	916,676
1847	117,233	328,652	32,942	187,196	666,113	421,601	1,087,714
1848	142,433	264,549	21,253	175,037	603,272	483,608	1,086,880
1849	214,259	227,847	43,550	179,891	655,547	439,393	1,104,940
1850	329,062	268,894	102,013	247,799	947,768	314,223	1,261,991
1851	328,688	223,657	66,524	294,399	913,268	480,430	1,393,698
1852	336,892	290,574	81,432	355,779	1,064,677	521,403	1,586,080

1853	444,080	391,224	110,337	394,620	1,340,261	481,261	1,821,522
1854	380,677	357,690	104,034	260,617	1,103,018	665,727	1,768,745
1855	348,215	220,865	85,762	222,963	877,805	657,129	1,534,934
1856	335,797	173,608	69,339	280,027	858,771	619,903	1,478,674
1857	436,604	66,824	59,177	236,381	798,986	565,016	1,364,002
1858	391,139	147,511	62,803	216,160	817,613	415,355	1,232,968
1859	550,405	226,450	73,788	272,964	1,123,607	418,428	1,542,035
1860	647,705	166,687	56,498	266,[illegible]83	1,137,873	372,104	1,509,977
1861	325,230	104,094	26,501	234,761	690,586	361,806	1,052,392
1862	563,346	143,246	34,785	226,685	968,062	601,612	1,569,674
1863	537,110	145,105	88,839	278,505	1,049,559	579,129	1,628,688
1864	654,850	61,167	142,533	217,598	1,106,148	372,773	1,478,921
1865	603,937	23,152	146,695	277,832	1,051,616	415,699	1,467,315
1866	706,385	101,665	206,535	315,299	1,329,884	440,110	1,769,994
1867	814,726	22,855	196,820	324,886	1,359,287	384,965	1,744,252
1868	891,071	20,517	182,145	365,620	1,459,353	498,956	1,958,309
1869	857,938	15,493	194,516	385,472	1,453,419	402,511	1,855,930
1870	937,799	18,340	227,795	281,583	1,465,517	450,994	1,916,511
1871	816,802	....	204,944	326,233	1,347,979	593,318	1,941,297
1872	855,478	4,662	254,885	322,840	1,467,865	482,933	1,950,798
1873	809,379	116,156	20,512	362,424	1,308,471	273,601	1,582,072
1874	719,609	35,592	182,922	254,558	1,192,681	290,072	1,482,753
1875	490,000	....	125,265	198,010	813,275	437,271	1,250,546
1876	493,995	76,760	120,407	199,563	890,725	284,588	1,175,313
1877	723,788	....	148,0[illegible]4	206,574	978,366	334,590	1,312,956
1878	650,082	....	149,349	321,235	1,120,666	243,454	1,364,120
1879	586,843	95,827	150,803	210,497	1,043,970	324,879	1,368,849
1880	725,098	111,007	199,874	166,228	1,202,207	364,557	1,566,764
1881	817,633	85,417	201,747	263,111	1,367,938	284,605	1,652,543
1882	865,920	70,605	191,459	269,823	1,397,816	373,927	1,771,743

(No. 30.)

AGRICULTURE.

STATEMENT of the tons arriving at tide water from Western States and from this State, the total tons arriving at tide water, the tons of the internal trade of this State, and the tons of the total movement on all the canals, from 1836 *to* 1852.

YEAR.	ARRIVING AT TIDE WATER.				Total arriving at tide water.	Internal movement of this State.	Total movement.
	BY WAY OF THE ERIE CANAL.		BY WAY OF CHAMPLAIN CANAL.				
	From Western States and Canada.	From this State, E. & lateral canals.	From Vermont and Canada.	From this State.			
1836	48,000	117,880	3,977	3,153	173,400	52,747	225,747
1837	47,546	98,172	2,209	3,541	151,468	56,575	208,043
1838	72,972	101,053	3,460	4,657	182,142	73,085	255,227
1839	91,369	63,713	3,918	4,785	163,785	102,267	266,052
1840	134,600	159,823	3,574	4,359	302,356	91,424	393,780
1841	173,436	92,483	2,921	1,399	270,240	121,665	391,905
1842	185,898	102,030	3,376	1,873	293,177	108,099	401,276
1843	214,655	124,313	4,588	1,584	246,140	109,657	455,797
1844	236,155	135,171	6,457	631	378,714	130,673	509,387
1845	206,422	224,032	7,572	9,601	447,627	107,533	555,160
1846	410,111	202,474	6,800	9,069	628,454	185,804	814,258
1847	683,138	192,227	8,348	14,004	897,717	195,229	1,092,946
1848	498,478	184,716	3,775	7,927	685,896	430,709	1,116,605
1849	535,538	200,471	11,857	21,734	769,600	250,659	1,020,259
1850	491,810	200,943	13,491	36,988	743,232	222,387	965,619
1851	687,694	168,433	8,176	27,117	891,420	233,844	1,125,264
1852	778,818	136,549	23,168	50,733	989,268	224,089	1,213,357

1853	727,655	163,017	19,166	17,351	932,189	218,734	1,150,923
1854	677,695	148,330	4,404	16,018	846,447	146,392	992,839
1855	751,940	1,137	6,940	22,387	782,604	264,740	1,047,344
1856	856,147	118,164	15,580	33,526	1,023,417	169,256	1,192,673
1857	548,374	....	23,945	21,194	561,894	205,476	767,370
1858	833,729	23,421	25,830	46,609	729,789	350,102	1,279,891
1859	420,897	84,107	46,605	58,708	610,317	206,467	816,784
1860	1,177,001	120,226	41,637	34,529	1,373,393	309,361	1,682,754
1861	1,761,932	109,791	18,937	43,587	1,934,247	210,126	2,144,373
1862	1,668,441	118,906	33,714	31,098	2,152,159	341,877	2,494,036
1863	1,676,480	133,431	68,062	20,280	1,898,253	337,822	2,236,075
1864	1,190,392	52,675	47,660	29,835	1,320,562	252,274	1,572,836
1865	1,231,342	71,369	49,223	27,397	1,379,831	316,760	1,696,091
1866	1,425,235	61,833	10,702	44,265	1,542,035	244,025	1,786,060
1867	1,050,484	49,499	6,169	37,560	1,143,712	294,805	1,438,517
1868	1,183,816	3,685	8,044	34,009	1,229,554	212,593	1,442,147
1869	1,030,970	24,962	5,385	25,788	1,087,105	226,966	1,314,071
1870	1,007,290	17,168	10,343	14,785	1,049,586	259,567	1,309,153
1871	1,583,435	30,348	3,338	29,178	1,646,299	217,569	1,863,868
1872	1,463,535	17,045	2,676	6,992	1,490,248	193,714	1,683,962
1873	1,563,849	....	3,196	22,037	*1,421,469	328,949	1,750,418
1874	1,400,993	28,551	5,475	35,853	1,470,872	301,711	1,772,583
1875	1,130,156	3,466	8,663	32,210	1,175,495	136,118	1,311,613
1876	875,079	7,312	5,020	19,072	906,483	161,014	1,067,497
1877	1,336,884	....	2,806	23,010	1,362,700	159,617	1,522,317
1878	1,728,293	84,962	390	19,621	1,833,266	87,970	1,921,236
1879	1,567,774	124,611	....	18,154	1,710,539	139,808	1,850,347
1880	1,980,199	103,897	5,621	566	2,090,283	318,075	2,408,358
1881	971,583	165,524	8,972	19,268	1,165,347	6,053	1,171,400
1882	943,538	41,997	20,770	18,013	1,024,318	148,939	1,173,257

---

* The quantity of wheat and flour from the Western States, which failed to reach tide water, in consequence of the sudden closing of the canals, was equivalent to 182,000 barrels.

(No. 31.)

MANUFACTURES.

STATEMENT of the tons going from tide water, the tons arriving at tide water from Western States and from this State, the total tons arriving at tide water, the tons of the internal trade of this State, and the tons of the total movement on all the canals, from 1836 *to* 1882.

YEAR.	Going from tide water.	ARRIVING AT TIDE WATER.				Total arriving at tide water.	Internal movement of this State.	Total movement.
		BY WAY OF ERIE CANAL.		BY WAY OF CHAMPLAIN CANAL.				
		From Western States.	From this State.	From Vermont and Canada.	From this State.			
1836	9,825	654	10,152	1,330	770	12,906	66,070	88,810
1837	9,921	471	7,879	1,077	697	16,124	61 690	81,735
1838	10,577	500	6,729	664	594	8,487	82,462	101,526
1839	10,850	801	5,885	849	985	8,565	92,553	111,968
1840	8,783	1,267	5,388	621	1,389	8,665	82,919	100,367
1841	10,859	3,702	9,076	1,105	4,008	17,891	99,146	127,896
1842	11,780	2,659	6,746	2,215	3,394	16,015	71,173	98,968
1843	6,921	2,077	21,465	3,506	2,445	29,493	87,863	124,277
1844	13,706	853	27,579	3,210	692	32,334	93,205	144,245
1845	13,569	2,565	40,619	3,838	2,790	49,812	97,257	160,368
1846	15,935	2,926	31,857	5,481	7,609	47,873	85,198	149,006
1847	22,886	5,508	20,937	3,807	26,111	56,363	120,085	176,448
1848	29,261	5,560	19,250	1,370	25,030	51,210	122,310	202,781
1849	26,140	5.930	18,410	1,045	18,903	44,288	139,562	203,990
1850	29,655	7,848	15,217	1,334	15,270	39,669	130,894	200,218
1851	33,178	14,457	15,415	828	21,602	52,302	137,049	222,529
1852	34,471	22,682	18.083	197	16,858	54,820	115,664	207,955

1853	39,571	23,355	13,743	21	15,698	52,817	137,648	230,036
1854	40,262	10,640	16,440	163	12,839	40,082	177,677	258,021
1855	40,147	9,539	13,620	704	20,981	44,844	186,882	281,873
1856	54,775	2,851	17,356	1,185	29,062	50,454	179,672	284,901
1857	31,820	10,078	13,747	2,522	29,264	55,611	145,372	232,803
1858	25,047	19,085	17,843	825	37,218	74,981	195,875	295,903
1859	22,602	8,598	14,920	....	39,561	63,079	113,740	299,421
1860	32,030	5,808	15,135	14	46,012	66,969	269,760	268,759
1861	19,523	17,994	6,412	....	18,668	43,074	217,662	280,256
1862	65,340	14,170	5,419	....	25,913	45,502	254,035	364,877
1863	45,173	17,296	8,648	....	30,324	56,268	217,991	319,432
1864	34,557	13,511	42,712	129	22,128	79,480	168,317	282,354
1865	44,365	7,904	25,992	233	24,082	58,211	179,256	281,832
1866	54,505	4,800	40,140	70	15,170	60,180	187,555	302,241
1867	46,994	3,824	46,196	22	27,208	77,250	196,600	320,844
1868	51,797	4,354	61,455	25	29,038	94,872	226,593	373,262
1869	38,379	1,997	65,270	1,462	15,894	84,623	219,237	342,239
1870	25,606	3,794	68,551	224	18,597	91,166	225,725	342,497
1871	35,313	2,235	68,722	1,691	15,043	87,721	213,254	336,288
1872	42,112	....	64,449	149	24,010	88,608	194,814	325,564
1873	27,964	....	39,237	....	7,184	46,421	193,435	267,820
1874	27,462	23	27,567	1	21,835	49,426	169,809	246,697
1875	26,241	563	51,223	....	18,423	70,209	179,281	275,731
1876	27,096	151	17,360	....	26,757	44,268	108,837	180,201
1877	32,882	2,726	30,767	7	20,045	53,545	97,791	184,218
1878	59,466	507	34,270	....	21,331	56,108	104,489	220,063
1879	99,137	472	28,864	....	17,592	46,928	109,238	255,303
1880	136,357	2,357	33,310	....	3,730	39,397	102,360	278,114
1881	74,349	2,111	45,611	....	5,291	53,013	54,811	182,173
1882	72,301	....	50,232	....	11,644	61,876	53,358	187,535

(No. 32.)

MERCHANDISE.

STATEMENT of the tons going from tide water to Western States and left in this State; the total tons going from tide water; the tons of the internal trade of this State; the tons of the total movement on all the canals, from 1836 *to* 1882.

YEAR.	GOING FROM TIDE WATER.				Total going from tide water.	Internal movement of this State.	Total movement.
	BY WAY OF ERIE CANAL.		BY WAY OF CHAMPLAIN.				
	To Western States.	Left in this State.	To Vermont and Canada.	Left in this State.			
1836	38,893	67,637	5,165	6,194	117,886	10,006	127,895
1837	25,391	51,799	4,573	4,821	86,484	8,293	94,777
1838	34,629	71,287	5,631	6,402	117,949	6,341	124,290
1839	34,197	75,910	7,291	7,177	124,575	7,711	132,286
1840	22,055	70,979	5,981	6,945	105,960	6,061	112,021
1841	31,040	85,866	6,813	9,122	132,844	8,213	141,054
1842	24,063	59,755	4,996	5,399	94,213	7,233	101,446
1843	37,335	63,199	6,709	6,443	113,686	5,523	119,209
1844	42,415	78,557	7,930	6,714	135,616	6,314	141,930
1845	49,618	77,883	8,837	8,404	144,742	6,708	151,450
1846	58,330	85,582	10,611	8,602	163,125	6,674	169,799
1847	75,883	115,787	12,475	11,040	215,185	9,705	224,890
1848	84,872	124,896	14,520	18,374	242,661	18,797	261,458
1849	87,899	122,444	17,086	9,406	236,835	18,620	255,455
1850	115,045	112,446	15,882	13,126	256,499	12,871	219,370
1851	177,623	143,410	17,124	11,073	349,230	16,174	465,404
1852	219,799	153,182	14,248	8,858	396,087	24,208	420,295
1853	261,752	134,932	13,227	16,490	426,401	31,926	458,327

1854	231,879	112,336	6,583	21,084	371,912	34,110	406,022
1855	220,466	104,257	4,473	13,766	342,962	31,440	374,402
1856	183,513	139,104	5,810	19,498	347,925	23,833	370,758
1857	108,125	60,815	11,603	7,616	188,160	34,794	222,954
1858	76,890	61,176	5,621	5,999	149,686	38,755	188,441
1859	98,876	56,648	6,582	7,558	169,664	41,518	211,182
1860	119,682	66,247	11,537	8,071	205,537	44,823	250,360
1861	52,462	46,818	8,096	10,225	117,601	17,495	135,096
1862	71,039	61,503	3,598	10,086	146,266	21,701	167,927
1863	94,095	52,124	2,976	6,200	155,395	16,883	172,278
1864	84,823	29,484	4,468	7,066	125,841	18,143	143,984
1865	72,541	43,088	12,595	3,255	131,479	23,489	154,968
1866	89,269	50,036	9,807	6,557	155,669	24,209	179,878
1867	120,262	48,370	10,622	6,387	185,641	34,239	219,880
1868	142,564	72,413	10,711	15,515	241,203	82,861	324,064
1869	152,125	67,279	6,745	9,020	235,169	33,801	268,970
1870	151,432	76,670	14,858	5,385	248,345	23,511	271,856
1871	167,884	66,106	17,715	14,955	266,660	21,768	288,428
1872	156,595	91,867	11,584	12,092	272,138	26,620	298,758
1873	67,926	56,841	19,867	3,399	148,033	24,957	172,990
1874	49,632	45,542	16,934	2,490	114,598	17,583	132,181
1875	30,707	36,379	12,799	14,512	94,397	15,744	110,141
1876	6,063	28,695	13,710	74	48,542	16,401	64,943
1877	28,353	27,214	14,826	... .	70,393	12,617	83,010
1878	101,598	14,379	5,803	4,800	126,580	11,484	138,064
1879	154,672	36,791	9,612	4,579	205,654	31,417	237,071
1880	234,691	55,763	23,030	5,679	319,163	36,002	355,165
1881	301,116	19,725	15,985	14,526	351,352	40,532	391,884
1882	165,373	41,907	11,706	156	219,142	64,032	283,174

(No. 33)

OTHER ARTICLES

STATEMENT of the tons going from tide water, the tons arriving at tide water from the Western States and from this State, the total tons arriving at tide water, the tons of the internal trade of this State, and the tons of the total movement on all of the canals, from 1836 *to* 1882.

YEAR.	Going from tide water.	ARRIVING AT TIDE WATER.				Arriving at tide water.	Internal movement of this State.	Total movement.
		BY WAY OF THE ERIE CANAL.		BY WAY OF CHAMPLAIN CANAL.				
		From Western States.	From this State.	From Vermont and Canada.	From this State.			
1836	38,865	163	26,949	2,595	5,888	35,527	38,638	111,103
1837	63,025	601	50,837	2,306	11,033	64,777	40,198	168,000
1838	44,492	530	38,243	2,324	7,580	48,667	93,710	186,779
1839	51,383	857	37,509	3,398	9,795	51,559	154,884	257,826
1840	30,025	1,040	24,587	2,844	7,707	36,178	156,028	222,231
1841	30,950	1,639	14,521	2,987	17,806	36,953	147,355	215,258
1842	22,720	4,851	23,139	2,141	8,647	35,769	72,155	130,644
1843	27,542	2,869	30,227	1,901	9,837	44,854	54,576	126,972
1844	38,891	2,929	40,018	2,655	16,996	62,599	55,161	156,651
1845	42,548	4,329	61,237	3,800	29,965	99,321	86,674	228,543
1846	47,643	6,783	45,271	5,530	25,398	82,982	87,998	218,623
1847	69,846	6,871	76,596	6,280	34,343	124,090	93,876	287,812
1848	83,647	12,683	65,668	8,130	21,046	107,527	140,113	331,287
1849	52,575	12,716	51,358	9,014	21,560	93,638	162,875	310,088
1850	86,896	13,690	44,103	7,101	48,288	113,273	179,250	379,419
1851	84,992	14,981	55,105	5,065	40,430	115,581	275,265	475,838
1852	92,969	13,106	47,995	3,144	48,515	112,760	220,025	435,754

1853	118,169	18,600	58,462	81	90,754	167,897	300,975	587,041
1854	137,660	25,379	79,707	247	114,231	219,564	383,011	740,235
1855	132,608	24,769	41,030	6,522	102,460	174,781	476,675	784,064
1856	196,395	17,755	58,128	5,150	95,766	176,754	415,927	789,076
1857	167,084	24,942	40,184	6,563	112,070	183,709	406,139	756,932
1858	126,216	24,668	33,024	3,601	86,233	147,526	394,247	667,989
1859	137,290	54,863	85,917	1,029	167,056	308,865	466,107	912,262
1860	168,198	55,845	84,490	4,880	120,192	265,407	504,759	938,364
1861	223,135	53,015	69,783	7,655	173,379	303,832	368,551	895,518
1862	271,397	48,880	54,686	4,102	129,318	236,986	493,888	1,002,271
1863	301,406	47,948	78,997	4,733	133,846	265,524	634,289	1,201,219
1864	366,824	48,483	82,844	2,171	163,926	297,424	710,598	1,374,846
1865	325,932	60,459	53,025	2,718	120,519	236,721	566,795	1,129,448
1866	506,110	98,568	82,955	2,042	183,571	367,136	863,801	1,737,047
1867	605,938	132,438	104,156	2,296	205,360	444,250	914,644	1,964,832
1868	774,020	135,981	77,693	3,260	240,093	457,027	1,113,396	2,344,443
1869	568,119	137,655	121,457	2,364	204,397	465,873	1,043,878	2,077,870
1870	656, 478	100, 064	134, 860	4, 032	298, 959	537, 915	1, 139, 359	2, 333, 752
1871	499, 565	115, 552	105, 983	2, 076	259, 570	483, 181	1, 055, 261	2, 038, 007
1872	611, 978	107, 009	128, 227	3, 348	362, 639	601, 223	1, 201, 087	2, 414. 288
1873	614, 206	151, 516	68, 244	4, 176	364, 261	588, 197	1, 389, 079	2, 591, 482
1874	638, 818	85, 977	165, 745	5, 125	240, 381	497, 228	1, 034, 328	2, 170, 374
1875	606,699	43,036	194,729	1,185	302,507	541,457	763,671	1,911,827
1876	694,996	33,529	239,003	2,766	305,044	580,342	408,837	1,684,175
1877	908,431	46,653	253,716	5,087	281,404	586,860	358,601	1,853,892
1878	579,459	71,630	257,244	1,342	289,478	619,694	328,684	1,527,837
1879	647,196	41,088	87,937	1,110	339,305	469,440	534,166	1,650,802
1880	714,410	33,151	221,068	17,019	434,013	705,251	429,594	1,849,255
1881	611,854	29,739	66,146	1,344	366,856	464,085	702,574	1,778,513
1882	730,273	14,671	96,747	1,109	447,461	559,998	761,443	2,051,714

(No. 34.)

STATEMENT showing the number of cargoes and light boats weighed at each lock in which additions were made, the pounds of addition, and the average weight of cargoes at each weigh-lock.

LOCKS.	Number of cargoes.	Reported weight, pounds.	ADDITION BY SCALES TO REPORTED CARGOES.	
			Cargoes.	Pounds.
Rochester	455	187,866,027	259	2,972,415
Syracuse	387	154,592,611	203	2,388,721
Utica	....	....	....	....
Oswego	....	....	....	....
Western lock	842	342,458,638	462	5,361,136
West Troy	624	110,550,283	294	5,369,199
Albany	33	9,668,294	24	556,771
Waterford	5,180	1,225,633,700	4,393	209,505,620
Eastern locks	5,837	1,345.852,277	4,711	215,431,590
Total western and eastern locks	4,679	1,688,310,915	5,173	220,792,726

STATEMENT No. 34 — (*Continued*).

LOCKS.	Total weight, pounds.	Average weight, pounds.	Number of light boats.	Number of cargoes reweighed.	Number of cargoes wholly of lumber weighed first time
Rochester	189,928,182	417,425	29	3	....
Syracuse	156,352,709	404,012	48	9	1
Utica	....	....	....	....	....
Oswego	....	....	....	....	....
Western locks	346,280,891	411,141	77	12	1
West Troy	190,816,470	305,796	73	87	42
Albany	10,048,685	304,506	17	....	....
Waterford	1,435,909,020	277,202	104	....	1,628
Eastern locks	1,636,774,175	280,413	194	87	1,670
Total western and eastern locks	1,983,055,066	296,909	271	99	1,671

(No. 35.)

STATEMENT showing the number of cargoes and light boats weighed at the eastern and western weigh-locks during ten years, from 1870 *to* 1882, *both inclusive, the number of cargoes to which additions were made, the pounds of addition, the average weight of cargoes, etc.*

LOCKS.	Number of cargoes.	Reported weight, pounds.	ADDITION BY SCALES TO REPORTED CARGOES.		Total weight, pounds.	Average weight, pounds.	Number of light boats.	Number of cargoes re-weighed.	Number of cargoes wholly of lumber weighed first time.
			Cargoes.	Pounds.					
1870. Western locks	11,372	3,889,385,873	4,718	58,762,133	3,948,148,006	347,181	529	985	892
Eastern locks	15,648	3,303,275,327	9,843	136,498,600	3,439,773,827	219,822	526	337	3,659
Total western and eastern locks	27,020	7,192,661,100	14,561	195,260,733	7,387,921,833	273,424	1,055	1,322	4,551
1871. Western locks	12,268	4,686,129,434	4,521	51,456,442	4,737,580,876	386,174	533	799	868
Eestern locks	14,807	3,157,922,530	8,559	144,745,908	3,302,668,438	223,048	569	469	3,582
Total western and eastern locks	27,075	7,844,051,964	13,080	196,202,350	8,040,254,314	296,962	1,102	1,268	4,450
1872. Western locks	12,327	4,651,884,373	6,600	57,593,752	4,709,478,125	381,989	611	516	510
Eastern locks	17,431	3,892,419,490	11,564	190,220,621	4,082,640,111	234,218	570	453	4,052
Total western and eastern locks	29,758	8,541,303,863	18,164	247,814,373	8,792,118,236	295,454	1,181	969	4,562
1873. Western locks	11,813	4,678,632,616	6,194	47,533,789	4,726,166,405	400,082	682	694	498
Eastern locks	14,535	3,381,546,269	9,063	142,038,667	3,523,584,936	242,421	898	555	2,389
Total western and eastern locks	26,348	8,060,178,885	15,257	189,572,456	8,249,751,341	313,107	1,580	1,249	2,797
1874. Western locks	9,767	4,364,610,992	5,045	45,912,850	4,410,523,842	451,574	676	633	471
Eastern locks	13,313	2,974,719,081	8,554	168,261,245	3,142,980,326	236,083	454	303	2,700
Total western and eastern locks	23,080	7,339,330,073	13,599	214,174,095	7,553,504,168	327,275	1,130	936	3,171
1875. Western locks	4,819	1,641,640,325	1,955	26,006,030	1,667,646,355	346,057	246	188	53
Eastern locks	11,475	2,693,047,510	8,106	161,276,553	2,857,324,063	249,004	312	608	1,564
Total western and eastern locks	16,294	4,334,687,835	10,061	190,282,583	4,524,970,418	277,708	558	796	1,617

1876. Western locks	3,852	1,323,848,202	1,700	22,582,888	1,346,431,090	349,541	177	115	155
Eastern locks	9,201	2,187,705,566	6,454	143,984,374	2,331,689,940	253,417	183	359	1,446
Total western and eastern locks	13,053	3,511,553,768	8,154	166,567,262	3,678,121,030	281,783	360	474	1,601
1877. Western locks	3,267	1,176,560,239	1,466	19,274,910	1,195,835,149	366,035	294	207	52
Eastern locks	12,526	3,016,240,288	7,857	143,279,758	3,159,520,046	252,237	213	198	4,795
Total western and eastern locks	15,793	4,192,800,527	9,323	162,554,668	4,355,355,195	275,777	507	405	4,847
1878. Western locks	2,652	961,787,559	1,509	21,463,641	983,251,200	370,758	405	70	1
Eastern locks	11,711	2,772,639,784	7,657	135,055,615	2,907,695,399	248,287	492	449	1,995
Total western and eastern locks	14,363	3.734,427,343	9,166	156,519,256	3,890,946,599	270,901	897	519	1,996
1879. Western locks	1,979	701,121,616	1,156	14,935,816	716,057,432	361,828	244	8	....
Eastern locks	12,494	2,987,540,150	7,882	150,338,807	3,137,878,957	251,071	310	322	1,228
Total western and eastern locks	14,473	3,688,661,766	9,038	165,274,623	3.853,936,389	266.284	554	330	1,228
1880. Western locks	2,528	794.665,491	1,394	16,966.522	871.632,013	321.056	323	88	1
Eastern locks	13,073	3,248,537,587	9,400	319,973,227	3,480,167,454	266,210	602	2	1,201
Total western and eastern locks	15,601	4,043,203,078	10,794	336,939,749	4,291,799,467	275,098	925	90	1,202
1881. Western locks	1,082	411,542,495	603	7,310,460	418,852,965	387,110	151	42	1
Eastern locks	5,835	1,390,129,771	4,553	185,674,311	1,576,004,082	270,095	470	3	1,533
Total western and eastern locks	6,917	1,801,672,266	5,156	192,984,772	1,994,858,047	288,399	621	45	1,534
1882. Western locks	842	342,458,638	462	5,361,136	346,280,891	411,141	77	12	1
Eastern locks	5,837	1,345,852,277	4,711	215,431,590	1,636,774,175	280,413	194	87	1,670
Total western and eastern locks	6,679	1,688,310,915	5,173	220,792,726	1,983,055,066	296,909	271	99	1,671

(No. 36.)

STATEMENT showing the lockages on each canal at various points during the year 1882.

	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total for 241 days.	Daily average, largest month.	Daily average for season.
ERIE CANAL.												
Lock No. 1, Albany	438	1,112	1,101	975	1,008	990	1,212	1,120	15	7,971	39	33
Lock No. 2, one mile from Albany.	625	1,541	1,791	1,484	1,633	1,409	1,910	1,310	11	11,693	62	49
Lock No. 3	962	2,330	2,617	2,052	2,815	2,505	3,554	2,075	......	19,390	115	80
West Troy side-cut locks	973	1,961	1,992	2,081	2,320	2,301	2,704	2,300	......	16,592	89	69
Port Schuyler side-cut locks	101	293	363	315	471	403	401	423	4	2,863	15	12
Alexander's lock, three miles west of Schenectady	978	2,707	2,713	2,451	3,329	3,082	3,959	2,679	7	21,908	128	90
Lock No. 33, Fort Plain	900	2,650	2,565	2,227	2,931	2,900	3,775	2,512	18	20,371	120	85
Lock No. 46, Frankfort	991	2,911	2,816	2,553	3,303	3,088	3,823	2,845	4	22,330	121	93
Syracuse lock	999	2,461	2,627	2,321	3,051	2,900	3,490	2,405	25	20,192	113	88
Lock No. 50, west of Syracuse	905	2,208	2,005	1,910	2,670	2,310	3,008	1,958	7	16,983	97	70
First lock east of Rochester	761	1,921	1,992	1,755	2,317	2,111	2,476	1,323	6	14,190	77	60
Locks at Lockport	908	2,161	2,090	2,015	2,637	2,317	2,713	1,661	38	16,600	78	69
Guard lock at Black Rock	830	1,957	1,887	1,809	2,511	1,957	2,357	1,481	81	14,620	76	61
CHAMPLAIN CANAL.												
Old Junction lock	803	1,651	1,657	1,707	1,590	1,400	1,406	1,295	....	11,396	56	47
Waterford side-cut locks	192	371	510	201	212	247	401	312	....	2,575	18	11
Sloop lock	202	391	514	263	312	308	411	215	....	2,720	18	11
Lock at Fort Edward	825	1,790	1,917	1,807	1,710	1,630	1,692	1,303	....	12,794	65	53
Upper lock, Glen's Falls feeder	382	628	638	572	517	437	461	472	....	4,107	21	17
Lock at Whitehall	408	1,085	1,230	1,317	1,215	1,178	1,191	751	....	8,314	41	34
OSWEGO CANAL.												
Lock No. 13	336	622	625	490	386	580	723	748	1	4,420	25	18
Upper lock, Fulton	598	1,088	1,057	1,010	1,153	1,023	1,315	1,826	20	8,546	44	35
								410				
CAYUGA AND SENECA CANAL.								204				
Lock at East Cayuga	190	330	372	356	297	291	310	263	4	2,619	14	11
Lock No. 2, Waterloo	81	210	210	199	219	213	278	228	2	1,685	9	7
Lock No. 9, North Cayuga	96	195	188	193	222	228	217	....	6	1,671	10	7
Black River Canal, Rome	130	518	516	451	444	378	378	....	....	3,045	17	13

STATEMENT No. 37.

STATEMENT showing the lockages, etc., at various points on the several canals for the years 1881 *and* 1882.

	Total for the season.		Daily average of largest month.		Daily average for the season.		Kind of lock on Erie canal.
	1881.	1882.	1881.	1882	1881.	1882.	
ERIE CANAL.							
Lock No. 1, Albany	6,858	7,971	37	39	33	33	Double lock
Lock No. 2, one mile from Albany	11,331	11,693	73	62	53	49	Single lock
Lock No. 3	19,637	19,390	121	115	93	80	Single lock.
West Troy side-cut lock	16,105	16,583	91	89	76	69	Double lock
Port Schuyler side-cut locks	4,150	2,843	25	15	20	12	Single lock.
Alexander's lock, three miles west of Schenectady	20,244	21,808	125	128	96	90	Double lock
Lock No. 32, Fort Plain	20,259	20,374	123	120	96	85	Double lock.
Lock No 45, Frankfort	22,289	22,336	142	123	105	93	Double lock.
Syracuse lock	20,733	20,182	125	113	96	88	Double lock.
Lock No 50, west of Syracuse	17,270	16,989	111	97	82	70	Double lock.
First lock east of Rochester	15,116	14,490	94	77	72	60	Single lock.
Lock at Lockport	17,124	16,609	103	88	81	69	Double lock.
Guard lock at Black Rock	14,410	14,626	90	76	68	61	
CHAMPLAIN CANAL.							
Old Junction lock	10,222	11,386	59	55	48	47	
Waterford side-cut locks	2,378	2,575	18	18	12	11	
Sloop lock	2,481	2,726	19	18	12	11	
Lock at Fort Edward	12,078	12,784	70	65	57	53	
Upper lock, Glens Falls feeder	3,535	4,107	24	21	17	17	
Lock at Whitehall	8,146	8,314	45	41	36	34	
OSWEGO CANAL.							
Lock No. 13	3,975	4,420	24	25	19	18	Double lock.
Upper lock, Salina	7,741	8,546	43	44	37	35	
CAYUGA AND SENECA CANAL.							
Lock at East Cayuga	2,343	2,010	18	14	11	11	
Lock No. 2, Waterloo	1,468	1,685	11	9	7	7	
Lock No 9, North Cayuga	1,636	1,671	12	10	8	7	
BLACK RIVER CANAL, ROME	2,688	3,019	20	17	13	13	

(No. 38.)

STATEMENT to show the tendency of lockages upon the Erie canal, at various points, so far as they have been preserved, for a series of years.

YEAR.	Lock No. 1, Albany.	Port Schuyler side cut locks.	West Troy side cut.	Total to and from Hudson river.	Lock 3 miles west of Schenectady.	Syracuse lock.	Lock 5 miles west of Syracuse.
1835	21,410	....	15,703	37,113	25,798	22,257	18,280
1836	22,451	....	16,061	38,452	25,516	21,692	17,034
1837	24,618	....	13,942	38,560	21,055	18,181	15,207
1838	33,478	....	16,418	39,896	25,962	20,383	18,557
1839	....	....	....	....	24,234	....	....
1840	....	....	....	....	26,987	....	....
1841	....	....	....	....	30,320	....	....
1842	....	....	....	....	22,869	19,397	16,069
1843	7,326	3,258	12,089	32,673	23,124	21,165	17,447
1844	20,845	4,213	13,749	38,837	28,219	25,198	20,044
1845	19,963	9,127	12,698	41,958	30,452	28,203	23,052
1846	18,169	11,495	16,196	45,860	33,431	32,212	25,225
1847	23,744	15,363	15,124	54,230	43,957	39,149	31,450
1848	19,519	6,940	16,255	42,714	34,911	34,760	29,066
1849	19,355	9,888	17,609	46,852	36,918	38,624	28,740
1850	18,382	8,984	24,056	51,422	38,444	41,170	27,799
1851	19,907	10,051	26,838	56,799	40,396	....	29,535
1852	20,178	8,086	29,104	57,368	41,572	38,993	29,952
1853	19,940	8,556	25,330	53,828	42,967	35,559	29,338
1854	16,258	10,626	19,903	46,787	35,981	32,815	29,088
1855	14,622	6,115	17,582	38,319	30,873	29,365	28,858
1856	12,498	10,742	22,804	46,044	31,223	28,347	20,788
1857	7,494	5,454	15,826	28,774	22,182	25,699	16,337
1858	11,412	5,824	16,138	33,374	23,474	27,054	16,957
1859	6,276	6,508	15,095	27,879	21,905	22,547	

1860	8,959	9,213	16,437	34,609	32,430	32,862	21,880
1861	8,399	9,420	16,775	34,594	31,179	29,510	24,283
1862	11,719	9,351	19,175	40,245	34,977	38,409	31,019
1863	8,397	8,123	18,497	35,017	30,071	30,532	26,328
1864	7,159	6,727	15,207	28,993	28,742	26,163	22,547
1865	6,263	6,169	15,974	29,406	26,037	23,332	20,203
1866	6,105	5,971	18,150	30,226	29,882	25,193	23,806
1867	6,993	6,572	15,073	28,638	28,654	24,849	21,453
1868	4,983	6,583	16,541	28,107	32,107	23,918	21,502
1869	3,776	6,085	13,819	23,680	24,625	24,834	21,654
1870	4,238	6,530	16,062	26,830	21,798	26,285	21,241
1871	5,385	6,444	18,135	29,964	29,725	29,592	24,779
1872	6,564	7,328	15,396	29,288	28,035	30,845	24,274
1873	6,347	6,233	14,626	27,206	24,960	28,234	23,551
1874	6,850	6,481	16,337	29,668	24,085	23,235	21,654
1875	7,093	3,250	15,926	26,269	18,761	19,241	17,664
1876	5,585	2,678	14,836	23,099	16,661	16,152	15,795
1877	6,356	3,398	17,385	27,139	21,408	19,767	19,576
1878	6,377	4,140	18,273	28,790	26,340	24,580	23,485
1879	6,028	4,093	18,348	28,469	25,916	23,787	21,595
1880	7,369	4,973	25,244	37,586	29,983	28,424	27,046
1881	6,858	4,150	16,105	27,113	20,244	20,733	17,270
1882	7,971	2,843	16,582	27,396	21,808	20,182	16,989

* Lockages omitted to be kept in 1859.

(No. 39.)

STATEMENT of the number of cribs passing Alexander's lock, in each month, for the years named.

MONTHS.	1860.	1861.	1862.	1863.	1864.	1865.	1866.
April	......	......	......	......	......	......	....
May	228	18	284	115	320	100	42
June	289	170	549	566	366	310	156
July	487	348	396	394	252	332	249
August	370	270	392	438	519	392	334
September	66	92	275	171	417	354	294
October	123	66	144	138	468	228	201
November	54	54	115	240	386	152	192
	1,617	1,018	2,155	2,062	2,728	1,868	1,468

STATEMENT No. 39—(*Continued*).

MONTHS.	1867.	1868.	1869.	1870.	1871.	1872.	1873.	1874.
April	......	6	......	......	3	......	......	......
May	24	108	30	6	30	......	12	204
June	76	66	132	246	198	144	132	415
July	384	150	92	300	270	126	180	490
August	486	192	49	324	240	246	180	431
September	288	228	27	252	234	264	234	226
October	288	138	24	192	71	186	276	161
November	200	148	206	124	21	108	129	55
	1,746	1,036	560	1,444	1,067	1,074	1,143	1,982

STATEMENT No. 39 — (*Continued*).

MONTHS.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.
April	....	....	...	....	....	20	....	6
May	1	27	30	16	36	147	79	140
June	36	126	163	144	141	222	204	133
July	60	52	85	54	90	130	168	96
August	168	48	183	62	60	153	111	152
September	153	57	96	90	90	193	168	152
October	90	54	109	118	164	78	158	170
November	48	93	93	41	58	114	128	90
	566	457	659	575	639	1,057	1,016	939

(No. 40.)

STATEMENT of the number of boats and other floats passed at Lock No. 26, ***three miles west*** *of Schenectady,* ***in*** *each of the years from* 1824 *to* 1882, *inclusive, and for each month during the season of canal navigation, in each of the said years; also, of the time of the commencement and close of each navigable season at that place, and the number of days the canal was navigable in each of said years at that place.*

YEAR.	1824.	1825.	1826.	1827.	1828.	1829.	1830.
Commencement of each season	April 30	April 12	April 20	April 22	March 27	May 2	April 20
Close of each season	Dec. 4	Dec. 5	Dec. 18	Dec. 18	Dec. 20	Dec. 17	Dec. 17
Number of days in each season	219	238	243	241	269	230	242
March	....	....	....	....	21	....	... .
April	7	739	679	221	1,886	....	584
May	966	1,797	2,525	2,621	1,220	2,041	2,234
June	1,006	1,764	2,518	2,618	1,141	1,903	1,848
July	876	1,388	2,089	1,866	1,667	1,553	1,619
August	684	1,336	1,800	1,541	1,468	1,222	1,527
September	695	1,057	1,630	1,591	1,320	1,502	1,822
October	916	1,764	1,893	1,176	1,706	2,043	2,219
November	953	1,062	1,937	1,009	1,931	2,115	2,446
December	61	78	105	361	219	240	654
Total	6,166	10,985	15,156	13,004	14,579	12,619	14,674

STATEMENT No. 40—(*Continued.*)

YEAR.	1831.	1832.	1833.	1834.	1835.	1836.	1837.	1838.
Commencement of each season	April 25	April 16	April 19	April 17	April 15	April 25	April 20	April 12
Close of each season	Dec. 1	Dec. 21	Dec. 12	Dec. 12	Nov. 30	Nov. 26	Dec. 9	Nov. 25
Number of days in each season	230	241	238	240	230	216	234	228
March	....	....	....	....	....	....	....	....
April	815	198	566	1,013	1,281	505	986	1,654
May	2,667	2,780	2,903	3,431	3,718	3,467	3,161	3,427
June	1,261	2,802	3,079	2,943	3,509	4,085	2,028	3,419
July	1,908	2,142	2,633	2,715	3,500	3,724	2,352	2,969
August	1,682	1,403	2,049	2,449	2,973	3,543	2,184	2,938
September	2,044	2,432	2,938	3,035	3,534	3,651	2,531	3,613
October	2,387	3,147	3,128	3,548	4,215	3,587	3,732	4,730
November	2,516	3,384	3,023	3,379	3,068	2,954	3,783	3,212
December	4	313	330	398	....	....	298	....
Total	16,284	18,601	20,749	22,911	25,798	25,516	21,055	25,962

STATEMENT No. 40—(*Continued.*)

YEARS.	1839.	1840.	1841.	1842.	1843.	1844.	1845.
Commencement of each season	April 20	April 20	April 26	April 20	May 1	April 18	April 15
Close of each season	Dec. 16	Dec. 3	Nov. 29	Nov. 23	Dec. 1	Nov. 26	Nov. 29
Number of days in each season	228	227	218	218	214	223	228
March	....	....	....	....	....	....	....
April	872	682	124	804	....	1,343	1,978
May	3,236	3,831	4,514	3,687	3,354	4,322	4,279
June	3,316	3,472	4,548	2,997	3,199	3,983	4,027
July	3,222	3,570	4,350	2,602	3,115	3,638	3,699
August	2,896	3,387	3,436	2,053	3,058	3,639	3,252
September	3,093	3,840	4,337	1,838	3,205	3,652	3,956
October	4,184	4,148	4,826	4,595	4,122	4,372	4,774
November	3,144	4,032	4,149	3,293	3,131	3,270	4,487
December	271	26	.....	....	....	....	....
Total	24,234	26,987	30,320	22,869	23,184	28,219	30,452

STATEMENT No. 40 — (*Continued.*)

YEARS.	1846.	1847.	1848.	1849.	1850.	1851.	1852.	1853.
Commencement of each season	April 16	May 1	May 1	May 1	April 22	April 15	April 20	April 20
Close of each season	Nov. 25	Dec. 1	Dec. 9	Dec. 5	Dec. 5	Dec. 5	Dec. 15	Dec. 15
Number of days in each season	224	214	223	219	228	235	239	239
March	... ...	... ...	... ...	....	....	....	....	....
April	1,139	....	....	....	758	1,934	1,317	945
May	4,846	5,838	4,984	5,653	5,299	1,140	5,138	6,537
June	4,893	6,294	4,982	5,438	4,093	5,541	6,033	6,103
July	4,506	6,860	4,333	4,873	4,689	5,398	6,087	6,307
August	4,242	6,289	4,032	4,097	4,789	5,291	5,526	6,149
September	4,772	5,996	4,610	4,603	5,280	5,051	5,657	5,189
October	4,832	6,930	6,067	5,998	5,901	6,019	5,956	6,166
November	4,474	5,750	5,753	5,938	6,221	4,971	5,102	6,112
December	27	....	150	318	414	48	756	450
Total	33,431	43,957	34,911	36,918	38,444	40,396	41,572	42,967

STATEMENT No. 40 — (*Continued*).

YEARS.	1854.	1855.	1856.	1857.	1858.
Commencement of each season	May 1	May 1	May 5	May 6	April 28
Close of each season	Dec. 3	Dec. 10	Dec. 5	Dec. 15	Dec. 8
Number of days in each season	217	224	214	224	225
March	....	....	....	....	....
April	....	....	....	....	199
May	4,688	3,198	2,476	1,892	3,544
June	5,847	4,668	4,577	3,222	3,594
July	5,353	4,841	5,065	3,838	3,434
August	4,281	4,520	5,037	4,313	3,614
September	5,810	4,250	4,789	3,736	2,943
October	5,216	5,053	4,764	2,568	3,975
November	4,657	3,726	4,515	2,303	2,668
December	129	617	....	310	....
Total	35,981	30,783	31,223	22,182	23,474

STATEMENT No. 40 — (*Continued*).

YEARS.	1859.	1860.	1861.	1862.	1863.
Commencement of each season	April 15	April 25	May 1	May 1	May 1
Close of each season	Dec. 12	Dec. 12	Dec. 10	Dec. 10	Dec. 12
Number of days in each season	242	232	224	224	222
March	....	....	....	....	....
April	812	381	....	....	....
May	2,303	3,541	3,716	4,392	4,596
June	2,544	4,263	4,101	5,061	5,092
July	2,594	4,606	3,822	5,376	4,083
August	2,432	4,703	3,731	4,635	4,409
September	2,654	4,892	4,349	5,260	3,441
October	2,954	5,380	5,386	5,247	3,915
November	3,769	4,524	5,925	4,517	4,166
December	152	149	99	489	369
Total	20,274	32,439	31,179	34,997	30,071

STATEMENT No. 40 — (*Continued*).

YEARS.	1864.	1865.	1866.	1867.	1868.
Commencement of each season	April 30	May 1	May 1	May 1	May 4
Close of each season	Dec. 8	Dec. 12	Dec. 12	Dec. 10	Dec. 7
Number of days in each season	223	226	226	224	217
March	....	....	....	....	....
April	....	....	....	....	216
May	3,235	1,864	2,710	2,266	3,895
June	4,430	2,803	3,124	2,935	4,265
July	2,985	3,819	4,637	4,516	4,300
August	5,237	4,437	5,104	5,001	4,619
September	4,205	3,886	4,568	4,008	4,249
October	4,597	4,283	4,607	5,898	5,449
November	3,685	4,454	3,990	4,000	5,014
December	368	491	1,142	30	100
Total	28,742	26,037	29,882	28,654	32,107

STATEMENT No. 40 — (*Continued*).

MONTHS.	1869.	1870.	1871.	1872.	1873.	1874.
Commencement of each season......	May 7	May 10	April 24	May 13	May 15	May 5
Close of each season...............	Dec. 10	Dec. 10	Nov. 30	Nov. 30	Dec. 5	Dec. 5
Number of days in each season......	217	215	220	202	204	215
March..........................	....	....	....	....	....	....
April..........................	....	....	471	....	....	....
May..........................	2,751	2,252	2,820	1,945	1,723	3,112
June..........................	4,176	4,308	3,710	4,174	3,895	4,321
July..........................	3,162	3,825	4,173	4,629	3,967	3,842
August..........................	3,483	3,674	4,451	3,487	3,897	3,358
September..........................	3,720	3,474	4,972	5,063	4,316	3,404
October..........................	2,208	3,880	5,046	4,829	4,959	3,370
November..........................	4,925	3,549	4,082	3,908	2,203	2,666
December..........................	200	162	....	....	....	....
Total..........................	24,625	25,124	29,725	28,035	24,960	24,073

STATEMENT No. 40 — (*Continued*)

MONTHS.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	Total:
Commencement of each season	May 18	May 4	May 8	April 15	May 8	April 16	May 12	April 11	
Close of each season	Dec. 30	Dec. 1	Dec. 7	Dec. 7	Dec. 6	Nov. 21	Dec. 8.	Dec. 7	
Number of days in each season	197	211	214	237	213	220	211	241	
March	....	....	....	....	....	....	....	... .	21
April	....	.... ..	....	1,033	....	1,063	....	978	28,195
May	983	2,066	1,433	3,759	2,405	3,878	2,455	2,707	192.967
June	2,654	2,433	2,480	3,249	2,965	4,732	3,740	2,713	218,049
July	2,805	2,400	2,703	2.484	3,241	4,597	3,064	2,354	210,633
August	3,229	2,211	3,061	2,451	4,263	4,507	2,715	3,329	204.524
September	2,938	2,337	3,708	4,259	3,990	4,313	3,045	3,082	204,844
October	3,312	2,676	4,260	5,349	5,139	4,345	2,849	3,959	249,969
November	2,843	2,548	3,700	3,693	3,799	2,548	2,302	2,679	213,957
December	....	....	63	63	114	....	74	7	10 640
Total	18,761	16,661	21,408	26,340	25,916	29,983	20,244	21,808	1,533,799

NOTE.—The earliest commencement is March 27, 1828; the latest May 18, 1875. The earliest close is November 21, 1880; the latest, December 21, 1832. The longest season of canal navigation was in the year 1828, viz.: 269 days; the shortest was in the year 1875, 197 days. October produces the greatest total for the fifty-nine years. viz.: 249,969. The greatest number which has ever passed in one month was in October, 1847, viz.: 6,930; average for each twenty-four hours of the month, 224.

(No. 41.)

STATEMENT showing for a series of years the tolls on all the canals, the number of boats arriving at and clearing from tide-water, the lockages at the Junction lock and at Alexander's lock, and the tonnage arriving at tide-water.

YEAR.	Tolls on all the canals.	No. lockages at Junction lock, Champlain canal.	No. lockages at Alexander's lock, west of Schen'tady, Erie canal.	Total locka's at Junction and Alexander's lock.	No. of boats arrived at and cleared from N. Y., Albany and Troy.	TONS ARRIVING AT TIDE WATER.		
						From Erie canal.	From Champlain canal.	Total.
1824	$340,642	....	6,166	....	8,776	....	....	....
1825	566,279	....	10,985	....	13,110	....	....	....
1826	765,104	....	15,156	....	....	....	....	....
1827	859,260	....	13,004	....	....	....	....	....
1828	838,444	....	14,579	....	23,662	....	....	....
1829	813,137	....	12,619	....	21,490	....	....	....
1830	1,056,922	....	14,674	....	23,874	....	....	....
1831	1,223,801	....	16,284	....	26,882	....	....	....
1832	1,229,483	....	18,601	....	25,826	....	....	....
1833	1,463,820	....	20,649	....	31,460	....	....	....
1834	1,341,329	....	22,911	....	32,438	....	....	....
1835	1,548,986	11,869	25,798	37,767	36,690	497,839	255,352	753,191
1836	1,614,336	11,248	25.516	36,764	34,190	419,125	227,222	696,347
1837	1,292,623	....	21,005	....	31,082	387,506	224,275	611,781
1838	1,590,911	....	25,962	....	32,120	419,949	221,232	640,481
1839	1,616,382	....	24,234	....	31,882	386,267	215,861	602,128
1840	1,775,747	....	26,987	....	30,456	467,315	201,697	699,012
1841	2,034,882	....	30,320	....	33,782	532,520	241,814	774,334
1842	1,749,196	8,813	22,809	31,682	32,840	480,149	286,477	666,626
1843	2,081,590	8,164	23,184	31,348	32,826	635,545	201,516	836,861
1844	2,446,374	10,099	28,219	37,313	38,786	799,816	219,278	1,019,094
1845	2,646,181	8,647	30,452	39,099	40,094	959,590	245,353	1,204,943
1846	2,756,106	8,771	33,431	43.202	42,936	1.107.270	255.049	1 363 319

[illegible]			[illegible]	[illegible]	[illegible]	1,431,252	513,631	1,744,283
1848	3,252,212	9,165	34,911	44,076	43,018	1,184,337	262,568	1,437,905
1849	3,268,226	10,397	36,918	47,315	46,520	1,266,724	313,222	1,579,946
1850	3,273,899	12,801	38,444	51,245	46,880	1,554,675	479,188	2,033,833
1851	3,329,727	13,861	40,396	54,257	53,316	1,508,667	468,474	1,977,151
1852	3,118,244	13,478	41,572	55,050	55,166	1,644,699	590,123	2,234,822
1853	3,204,718	13,313	42,967	56,280	55,732	1,851,438	654,358	2,505,797
1854	2,773,566	14,693	35,981	50,674	48,825	1,702,693	521,050	2,223,743
1855	2,805,077	13,528	30,873	44,401	41,110	1,420,715	474,878	1,895,593
1856	2,748,812	15,873	31,223	47,096	44,628	1,587,120	536,339	2,123,468
1857	2,045,641	9,291	22,182	31,473	35,506	1,117,199	499,988	1,617,187
1858	2,110,754	8,912	23,474	32,386	33,118	1,496,687	488,455	1,985,142
1859	1,723,945	9,240	20,274	29,514	29,788	1,451,333	670,339	2,121,672
1860	3,009,597	9,159	32,479	41,598	40,608	2,276,061	578,816	2,854,877
1861	3,908,785	6,607	31,919	37,786	39,526	2,449,609	530,535	2,980,144
1862	5,188,943	7,889	34,977	42,866	41,690	2,917,094	485,615	3,402,709
1863	4,645,207	10,816	30,071	40,887	39,386	2,647,689	627,038	3,274,727
1864	3,983,982	11,118	28,742	39,860	33,898	2,146,634	658,623	2,805,257
1865	3,839,955	12,545	26,037	38,582	31,162	2,078,361	651,820	2,730,181
1866	4,436,639	10,540	29,882	40,422	31,562	2,523,664	781,943	3,305,607
1867	4,088,058	9,752	28,654	38,406	35,038	2,226,112	803,583	3,029,695
1868	**4,246,563**	**9,805**	**32,107**	**41,912**	**33,402**	2,378,572	862,284	3,240,806
1869	3,778,501	8,709	24,625	33,334	26,684	2,257,689	838,453	3,096,142
1870	2,611,578	10,075	25,124	35,199	33,116	2,290,698	865,604	3,156,302
1871	3,109,838	9,436	29,725	39,161	34,282	2,648,877	846,929	3,494,801
1872	3,072,411	11,235	28,035	39,270	36,730	2,670,405	977,539	3,747,944
1873	2,976,718	9,646	24,960	34,606	33,608	2,585,355	791,294	3,376,649
1874	2,637,071	7,978	24,085	32,063	30,806	2,470,297	752,815	3,223,112
1875	1,590,032	8,064	18,761	26,825	26,156	1,914,942	693,835	2,608,777
1876	1,340,004	9,260	16,661	25,931	25,952	1,745,320	680,862	2,426,182
1877	880,895	9,379	21,408	30,787	31,768	2,298,008	688,804	2,986,812
1878	993,348	9,181	26,340	35,521	36,848	2,831,790	805,311	3,637,101
1879	941,574	9,124	25,916	35,040	35,048	2,546,002	740,174	3,286,176
1880	1,155,419	11,915	29,983	41,898	42,298	3,226,358	841,044	4,067,402
1881	632,390	10,222	20,244	30,466	29,808	2,193,302	872,537	3,065,839
1882	655,826	11,386	21,808	33,194	32,454	2,102,440	965,712	3,068,152

(No. 42.)

STATEMENT showing the tons of each kind of merchandise going to other States by way of Buffalo and Oswego, the tons of merchandise left in this State, and tons of merchandise going from tide-water by way of the Erie canal, for the year 1882.

STATES.	Sugar.	Molasses.	Coffee.	Nails, spikes and horse shoes.	Iron and steel.	Railroad iron.	Flint, enamel, crockery and glassware.	All other merchandise.	Total.
Pennsylvania	......	......	......	....	2,592	......	....	1,619	4,211
Ohio	828	100	......	....	18,737	340	9	12,204	32,218
Michigan	......	......	......	....	731	657	8	3,216	4,612
Indiana	......	......	......	....	......	......	....	1,404	1,404
Illinois	4,661	2,280	1,795	212	20,139	5,200	177	44,860	79,324
Wisconsin	......	60	......	....	460	1,126	1	5,341	6,988
Kentucky	......	......	......	....	......	......	....	678	678
Missouri	......	......	......	....	673	......	1	2,436	3,110
Tennessee	......	......	......	....	......	......	....	21	21
Minnesota	......	......	......	....	......	1,308	....	1,935	3,243
Iowa	......	......	......	....	......	224	2	1,972	2,198
Kansas	......	......	......	....	......	......	....	......	....
Nebraska	......	......	......	....	......	......	....	......	....
Canada	......	......	......	186	......	25,765	....	1,415	27,366
Going to other States	5,489	2,440	1,795	398	43,332	34,620	198	77,101	165,373
Left in this State	627	647	......	738	4,162	20,160	149	15,424	41,907
Going from tide-water	6,116	3,087	1,795	1,136	47,494	54,780	347	92,525	207,280

(No. 43.)

STATEMENT of the tons and value of merchandise going to other States by way of Buffalo and Oswego, in each year, from 1836 *to* 1882, *both inclusive.*

YEARS.	Value per pound.	Buffalo, tons.	Oswego, tons.	Total tons.	Value.
1836	$0 12½	30,874	8,019	38,893	$9,723,250
1837	12½	22,230	3,061	25,291	6,322,750
1838	12½	32,087	2,542	34,629	8,657,250
1839	15	29,699	4,498	34,197	10,259,100
1840	16	18,863	3,192	22,055	7,057,600
1841	18	25,551	5,489	31,040	11,174,400
1842	15	20,525	3.538	24,063	7,218,900
1843	17½	32,798	4,537	37,335	13,067,250
1844	17½	32,767	9,648	42,415	14,485,250
1845	17½	37,713	11,905	49,618	17,366,300
1846	17½	44,487	13,843	58,330	20,415,500
1847	18	57,290	18,540	75,830	27,298,800
1848	18	64,428	20,444	84,872	30,553,920
1849	18	67,966	19,933	87,899	31,643,640
1850	18	79,405	35,096	114,501	41,220,360
1851	18	99,918	74,981	174,899	62,963,640
1852	18	143,787	76,012	219,799	79,127,640
1853	18	163,192	98,560	261,752	94,230,720
1854	18	167,550	64,329	231,879	83,476,440
1855	18	145,530	74,936	220,466	79,367,760
1856	18	114,696	68,817	183,513	66,064,680
1857	24	74,733	43,393	118,126	80,700,480
1858	26	47,350	29,540	76,890	39,982,800
1859	18	72,767	26,109	98,876	35,595,360
1860	25	72,030	47,652	119,682	59,841,000
1861	27	35,278	17,184	52,462	28,329,480
1862	26	52,945	18,094	71,039	36,940,280
1863	23	64,124	29,971	94,095	43,283,700
1864	28	57,338	27,485	84,823	47,500,880
1865	27	59,175	13,366	72,541	39,172.140
1866	22	68,375	20,894	89,269	39,278,360
1867	10	83,045	37,217	120,262	24,052,400
1868	14	99,559	43,005	152.564	39,917,920
1869	8	90,755	61,370	162,125	24,340,000
1870	7	96,186	55,246	151,432	21,200,480
1871	4	122,578	44,526	167,104	13,368,320
1872	8	146,413	10,182	156,595	25,055,200
1873	10	57,579	10,347	67,926	13,585,200
1874	4	32,059	17,573	49,632	3,970,560
1875	3	27,367	3,340	30,707	1,842,420
1876	5	3,270	2,793	6,063	606,300
1877	5	20,326	8,027	28,353	2,835,300
1878	6	85,697	15,888	101,585	12,190,200
1879	6	142,618	12,054	154,672	18,560.640
1880	4½	222,199	12,492	234,691	20,338,360
1881	....	295,823	5,293	301,116	24,131,920
1882	....	163,448	1,925	165,373	13,722,202

(No. 44.)

STATEMENT of the estimated value of property coming from, and merchandise going to other States, by way of Buffalo, Black Rock, Tonawanda and Oswego, from 1836 *to* 1882, *both inclusive.*

YEARS.	Products coming from.	Merchandise going to.	Total.
1836	$5,493,816	$9,723,250	$15,217,066
1837	4,813,626	6,322.750	11,136.376
1838	6,369,645	8,657,250	15,026,895
1839	7,258,968	10,259,100	17,518,068
1840	7,877,358	7,057,600	14,934.958
1841	11,889,273	11,174,400	23,063,673
1842	9,215,808	7,218.900	16,434,708
1843	11,937,943	13.067,250	25,005,193
1844	12,875,558	14,485.250	27,360,808
1845	14,162,239	17,366,300	31,520,539
1846	20,471,939	20,415,500	40,887,439
1847	32,666,324	27,298,800	59,965,124
1848	23,245,353	30,553,920	53,799,273
1849	26,713,796	31,643,640	58,357,436
1850	25.471,962	41,220,360	66,692,322
1851	26,928,315	62,963,640	89,891,955
1852	37,041,380	79,127,640	116,169,020
1853	42,367,564	94,230,720	136,598,284
1854	39,346,283	83,476,440	122,822,723
1855	43,555,243	79,367,760	122.923.003
1856	38,043,813	66,064,680	104,108,493
1857	26,466,121	80,700,480	107,166,601
1858	36,182,405	39,982,800	76,164,205
1859	24,428,412	35,595,360	60,023,772
1860	42,915,046	59,841,000	102,756,046
1861	49,405,375	28,329,480	77,734,855
1862	72,131.136	36,940,280	109,071,416
1863	85,728,457	43,283,700	129.012.157
1864	108,866,953	47,500,880	156,367.833
1865	70,774,734	39,172,140	109,966,874
1866	83,840,459	39,278,360	123,118,819
1867	88,821,450	24,052,400	112,873,850
1868	88,816,003	39,917,920	128,733,923
1869	72,090,807	24,340,000	96,430,807
1870	57,080,343	21,200,480	78,280,823
1871	91,634,102	13.368,320	105,002.422
1872	70,513,528	25.055,200	95,568,728
1873	65,500,487	13,585,200	79,085,687
1874	55,912,015	3,970,560	59,882,575
1875	51,193,839	1,842.420	53,036,259
1876	34,018.243	606,300	34,714,543
1877	50,929,512	2,835,300	53,764,812
1878	53,453,167	12,190,200	65,643,367
1879	57,296,290	18,560,640	75,856,930
1880	69,243,022	20,338,360	89,581,382
1881	48,500,827	24.131.920	72,632,747
1882	49,754,005	13,722,202	63,476.207

(No. 45.)

STATEMENT showing the estimated value of all the property transported on each canal in each year, from 1837 *to* 1852. *inclusive.*

YEAR.	ERIE CANAL.					
	CLEARED AT NEW YORK, ALBANY AND WEST TROY.			Cleared at Buffalo, Black Rock and Tonawanda.	Cleared at all other offices.	Total.
	Merchandise.	Other articles.	Total.			
1837	$20,834,938	$4,942,209	$25,784,147	$3,286,128	$18,650,604	$47,720,879
1838	28,159,150	4,907,708	33,062,858	4,854,927	19,209,858	57,127,613
1839	34,888,244	5,206,058	40,094,302	5,222,756	18,854,427	64,171,485
1840	33,570,358	2,827,681	36,398,039	6,200,829	15,204,936	57,803,803
1841	47,258,223	9,540,224	56,798,447	9,607,924	16,376,503	82,881,874
1842	27,894,994	4,420,004	32,314,998	7,541,793	12,466,736	52,323,527
1843	38,979,593	3,278,895	42,258,488	9,732,616	13,288,470	65,297,574
1844	47,254,588	5,887,815	53,142,403	9,561,146	15,822,504	78,526,053
1845	50,532,494	4,921,504	55,453,998	10,351,749	19,248,224	85,053,971
1846	60,007,709	4,620,765	64,628,474	15,819,314	18,815,659	90,263,426
1847	72,221,399	5,657,367	77,878,766	28,503,745	23,518,927	121,909,448
1848	72,069,861	5,407,920	77,477,781	19,621,700	11,544,421	118,643,902
1849	73,132,295	5,349,646	78,481,941	20,647,562	22,238,010	121,367,513
1850	69,807,791	5,019,208	74,826,999	20,991,462	31,335,526	127,159,987
1851	75,929,351	4,810,548	80,739,899	24,543,286	31,784,847	137,068,032
1852	115,225,258	5,862,054	121,087,312	25,674,776	22,219,056	168,981,144
1853	110,224,387	5,660,944	116,185,331	28,866,951	27,629,827	172,682,109
1854	110,186,968	6,585,998	116,772,966	29,745,555	30,613,260	177,161,781
1855	105,329,061	8,114,802	113,443,863	31,403,640	24,906,992	169,754,495
1856	127,187,140	6,944,567	134,131,707	22,873,866	21,749,502	178,755,075
1857	64,276,443	6,739,798	71,016,241	17,567,181	15,470,217	104,053,639

STATEMENT No. 45—(*Continued*).

YEAR.	ERIE CANAL.					
	CLEARED AT NEW YORK, ALBANY AND WEST TROY.			Cleared at Buffalo, Black Rock and Tonawanda.	Cleared at all other offices.	Total.
	Merchandise.	Other articles.	Total.			
1858	$53,364,111	$4,619,012	$57,983,123	$25,039,901	$20,570,577	$103,593,601
1859	55,417,502	6,472,427	61,889,929	17,093,299	20,733,252	99,716,480
1860	73,252,071	5,934,689	79,186,760	25,839,113	19,319,230	124,345,103
1861	40,478,807	4,003,249	44,482,056	44,328,036	14,601,679	93,421,771
1862	73,841,493	8,536,854	82,378,347	54,026,643	19,801,899	156,106,889
1863	83,956,145	12,072,285	96,028,430	66,679,326	24,535,709	187,243,465
1864	66,637,242	18,602,384	85,239,626	86,861,946	28,956,563	201,058,135
1865	78,984,734	19,287,409	98,272,143	51,259,758	36,582,817	186,114,718
1866	79,846,925	25,622,774	105,469,699	61,276,267	31,385,661	198,331,627
1867	81,728,478	23,345,511	105,073,989	65,274,795	38,275,365	208,624,149
1868	106,412,773	28,121,293	134,534,066	67,275,801	37,751,702	239,561,569
1869	86,399,578	24,783,884	111,183,462	51,889,028	27,823,978	190,896,468
1870	77,676,473	28,206,942	105,883,415	39,049,740	28,278,321	173,211,476
1871	63,160,600	27,081,356	90,241,956	70,825,512	25,263,522	186,330,990
1872	74,207,575	13,511,291	87,718,866	54,675,424	25,557,017	167,951,307
1873	60,240,154	11,378,980	71,619,134	52,838,967	23,363,831	147,821,932
1874	48,347,598	24,167,707	72,515,305	49,328,339	19,843,974	141,687,618
1875	27,593,471	18,856,723	46,450,194	43,532,213	19,350,223	109,332,630
1876	22,406,662	22,429,090	44,835,752	27,975,048	15,806,424	88,617,224
1877	38,759,452	23,428,070	62,187,522	44,483,617	8,002,778	114,673,917
1878	61,548,276	34,216,433	95,764,709	48,193,636	15,378,221	159,336,566
1879	132,257,955	59,759,309	192,017,264	52,107,506	15,651,264	259,776,034
1880	93,670,536	27,748,692	121,419,228	64,943,202	20,034,098	206,396,528
1881	64,864,513	16,932,451	81,796,964	42,373,529	12,268,227	136,438,720
1882	53,204,332	10,279,918	63,484,250	43,082,104	12,758,184	119,324,538

STATEMENT No. 45 — (*Continued.*)

YEAR.	CHAMPLAIN CANAL.			OSWEGO CANAL.		
	Cleared at Whitehall.	Cleared at other offices.	Total.	Cleared at Oswego.	Cleared at other offices.	Total.
1837	$2,136,377	$1,906,948	$3,233,325	$1,527,498	$1,110,486	$2,637,984
1838	2,683,679	878,481	3,562,160	1,514,718	814,320	2,329,038
1839	2,994,767	962,108	3,956,875	2,036,212	1,029,537	3,065,749
1840	2,489,576	821,207	3,310,783	1,677,069	756,449	2,433,518
1841	2,520,245	794,999	3,315,244	2,182,349	473,843	2,655,832
1842	2,050,334	775,999	2,826,333	1,674,015	389,256	2,063,271
1843	2,546,055	1,139,584	3,685,639	2,205,327	612,237	2,817,564
1844	3,094,612	1,253,001	4,347,613	3,314,121	757,635	4,072,047
1845	3,933,918	1,431,656	4,365,574	3,810,490	816,648	4,627,174
1846	3,660,210	1,188,777	4,848,987	4,652,665	1,016,569	5,669,234
1847	4,261,450	1,603,962	5,865,413	7,440,131	1,173,674	8,613,805
1848	3,348,112	2,886,616	15,487,184	7,099,076	1,217,800	8,316,896
1849	4,120,019	2,419,429	6,539,448	8,926,194	1,097,803	10,023,997
1850	6,300,320	2,294,221	8,594,841	9,329,718	895,520	10,225,238
1851	3,499,640	2,410,573	5,910,213	9,119,614	1,119,855	10,239,469
1852	4,143,354	3,470,472	7,613,826	10,746,037	1,237,444	11,083,481
1853	5,340,194	5,264,328	10,604,522	14,429,760	1,504,543	15,934,303
1854	4,000,341	6,280,361	10,280,702	9,963,563	2,110,680	12,074,247
1855	3,892,246	6,666,128	10,558,378	12,400,275	2,785,610	15,185,885
1856	4,261,436	6,586,002	10,747,438	15,578,570	2,564,300	18,142,870
1857	3,607,942	10,568,119	14,176,061	9,573,993	1,799,170	11,373,163
1858	3,488,266	7,930,104	11,418,370	12,496,867	3,481,214	15,978,081
1859	5,473,417	9,224,081	14,697,498	7,335,113	2,370,591	9,705,704
1860	7,134,234	8,519,943	15,654,177	17,075,933	6,656,212	23,732,145
1861	2,573,566	9,445,572	12,019,138	15,067,339	3,138,061	18,205,400
1862	3,995.234	12,531,284	16,526,518	18,104,493	4,193,041	22,297,534

STATEMENT No. 45—(*Continued.*)

YEAR.	CHAMPLAIN CANAL.			OSWEGO CANAL.		
	Cleared at Whitehall.	Cleared at other offices.	Total.	Cleared at Oswego.	Cleared at other offices.	Total.
1863	$8,181,660	$11,834,660	$20,016,320	$19,049,131	$4,178,573	$23,227,704
1864	14,239,377	17,891,639	32,131,016	22,005,007	7,130,236	29,135,243
1865	16,172,945	18,085,899	34,258,844	19,514,976	5,338,908	24,853,884
1866	11,980,465	20,332,955	32,313,420	22,564,192	6,266,593	28,830,785
1867	10,903,059	20,595,903	31,498,962	23,756,655	4,956,345	28,713,000
1868	18,222,785	9,469,751	27,692,536	21,540,202	5,509,765	27,049,967
1869	6,417,121	17,668,422	24,185,543	20,201,779	4,799,147	25,000,926
1870	7,285,738	22,019,193	29,304,931	18,030,603	3,718,020	21,748,623
1871	6,991,876	16,428,385	23,420,261	20,808,590	3,434,695	24,243,285
1872	9,495,280	19,094,827	28,590,107	15,838,104	2,764,058	18,602,162
1873	6,919,222	17,041,393	23,960,615	12,661,520	1,676,332	14,337,852
1874	6,583,676	24,689,243	31,272,919	17,087,097	2,209,206	19,296,303
1875	4,745,831	16,674,455	21,420,286	9,028,903	2,227,504	11,256,407
1876	4,609,632	10,351,028	14,960,660	6,043,195	860,062	6,903,257
1877	4,495,419	11,867,563	16,362,982	6,445,895	....	6,445,895
1878	4,542,137	11,411,039	15,953,176	5,463,977	....	4,463,977
1879	4,724,970	13,162,649	17,887,619	6,512,437	....	6,512,437
1880	4,953,230	26,838,602	31,791,732	8,251,152	....	8,251,152
1881	5,106,505	10,990,630	16,097,135	8,255,138	....	8,255,138
1882	5,741,896	12,693,754	18,435,650	8,493,467	....	8,493,467

STATEMENT No. 45 — (*Continued*).

YEARS.	Cayuga and Seneca canal.	Chemung canal.	Crooked Lake canal.	Chenango canal.	Genesee Valley canal.
1837	$684,607	$609,207	$583,393	$338,894	....
1838	929,122	264,812	738,301	795,583	....
1839	598,916	294,678	574,505	737,556	....
1840	728,524	238,061	522,280	866,196	$400,726
1841	847,473	399,275	586,466	778,956	737,809
1842	578,664	295,150	384,613	597,389	947,661
1843	561,572	321,707	435,668	640,093	1,099,374
1844	676,934	489,789	551,953	881,957	1,374,806
1845	965,964	929,259	667,848	1,257,413	1,762,656
1846	958,525	882,802	723,846	1,253,609	1,882,662
1847	1,293,701	1,247,029	876,280	1,322,754	2,209,763
1848	1,114,418	1,070,614	743,868	1,237,497	2,147,283
1849	993,114	1,042,141	816,871	1,106,791	2,233,516
1850	1,306,253	1,131,036	909,236	1,174,065	2,436,104
1851	806,956	1,013,132	647,065	1,078,403	2,433,605
1852	671,716	1,354,136	748,807	1,440,623	2,786,745
1853	897,657	1,806,757	997,340	1,999,803	3,533,879
1854	1,346,050	1,651,133	373,482	1,556,623	5,575,982
1855	1,137,829	1,681,218	723,346	1,981,777	2,225,256
1856	1,796,833	1,830,915	708,825	2,284,391	3,028,250
1857	1,532,769	1,424,467	292,561	2,395,088	1,106,879
1858	1,426,181	1,436,835	505,576	1,856,266	1,412,582
1859	1,431,161	1,684,273	438,680	1,923,555	1,348,246
1860	1,253,681	1,374,595	425,087	1,715,268	1,176,966
1861	1,065,357	1,136,654	351,094	2,067,477	748,595

STATEMENT No. 45 — (*Continued*).

YEARS.	Cayuga and Seneca canal.	Chemung canal.	Crooked Lake canal.	Chenango canal.	Genesee Valley canal.
1862	$1,123,754	$1,892,288	$605,964	$1,895,199	$942,342
1863	1,337,577	2,294,055	366,844	2,724,009	1,127,233
1864	2,231,962	3,228,134	381,806	3,468,720	832,092
1865	2,534,611	1,734,656	482,033	3,015,622	669,638
1866	3,106,721	1,860,474	654,208	2,225,597	1,177,342
1867	3,008,167	1,238,531	386,414	2,105,704	918,052
1868	3,542,385	2,681,705	284,869	2,607,774	1,215,736
1869	3,023,417	2,775,124	319,227	1,145,003	882,880
1870	3,108,470	1,184,994	353,726	718,651	1,013,911
1871	1,163,441	1,130,668	424,068	283,138	992,026
1872	2,500,159	1,275,236	161,687	165,801	912,605
1873	2,260,982	1,165,137	272,479	230,076	1,113,915
1874	1,986,487	885,386	207,339	203,039	643,608
1875	1,345,150	568,994	....	179,599	458,208
1876	837,720	918,168	....	38,690	337,655
1877	1,203,243	58,538	....	....	243,823
1878	891,936	44,960	....	....	108,059
1879	590,830	....	....	....	....
1880	853,157	....	....	....	....
1881	560,236	....	....	....	....
1882	685,397	....	....	....	....

STATEMENT No. 45 — (*Continued*).

YEARS.	Black River canal.	Oneida Lake canal.	Baldwinsville canal.	Total.
1837				$55,809,283
1838				65,756,459
1839				73,399,764
1840				66,303,892
1841				92,202,929
1842				60,921,142
1843				74,841,281
1844				90,921,152
1845				100,629,856
1846				115,812,109
1847				151,563,427
1848		$233,235		140,086,157
1849		576,982		144,732,285
1850		709,894		156,397,929
1851	$436,947	467,169		149,881,801
1852	542,040	347,979		196,603,517
1853	521,981	480,999		209,584,578
1854	685,250	606,227	$76,597	210,946,781
1855	718,952	264,934	77,447	204,390,147
1856	603,065	345,548	66,684	218,327,062
1857	471,880	362,736		136,997,018
1858	656,297	170,512		138,568,844
1859	928,668	286,055		132,160,758
1860	919,741	286,493		170,849,198
1861	876,501	252,435		130,115,893
1862	1,743,843	223,906		203,234,331
1863	1,709,254			240,046,461
1864	1,943,531			274,400,639
1865	2,573,098			256,237,104
1866	2,463,502			270,963,670
1867	2,463,733			278,956,712
1868	1,665,388			305,301,929
1869	1,053,496			249,281,284
1870	1,191,394			231,836,176
1871	779,814			238,767,691
1872	754,257			220,913,321
1873	552,512			191,715,500
1874	491,623			196,674,322
1875	447,301			145,008,575
1876	447,005			113,090,379
1877	432,565			139,411,963
1878	455,854			182,254,528
1879	513,806			285,280,726
1880	552,121			247,844,790
1881	802,336			162,153,565
1882	979,853			147,918,907

(No. 46.)

STATEMENT of the number of clearances issued at each office on all the canals from 1833 *to* 1882, *inclusive.*

YEAR.	ERIE CANAL.									
	New York.	Albany.	West Troy.	Schenectady.	Fultonville.	Little Falls.	Utica.	Rome.	Syracuse.	Jordan.
1833	......	8,932	6,698	2,296	......	749	2,832	1,488	2,305	......
1834	......	9,283	6,942	3,203	......	860	3,211	1,890	3,048	......
1835	......	10,967	7,378	3,868	......	813	3,005	3,007	2,542	......
1836	......	10,235	6,801	3,358	1,142	788	3,403	2,087	2,544	......
1837	.....	9,147	6,394	2,000	1,174	768	3,467	1,908	2,892	......
1838	......	9,530	6,530	2,567	977	1,015	3,924	1,804	3,206	......
1839	......	8,331	7,607	4,431	1,027	906	3,322	1,750	3,490	......
1840	......	8,860	6,868	4,678	954	999	2,780	1,688	3,510	......
1841	......	9,620	7,170	2,560	904	1,070	3,155	1,749	4,161	......
1842	......	9,293	7,143	1,235	882	636	3,316	1,423	3,614	......
1843	......	8,600	7,813	1,244	1,025	612	3,564	1,452	3,922	......
1844	......	10,345	9,048	1,073	775	481	3,465	1,497	4,735	......
1845	......	10,240	9,811	1,068	978	542	3,838	1,950	4,447	......
1846	989	10,170	10,308	1,149	912	700	3,889	1,959	4,409	......
1847	1,560	12,637	11,630	1,120	993	683	4,762	2,254	5,710	......
1848	1,141	10,501	11,008	1,194	834	761	4,817	2,332	5,217	......
1849	1,502	10,920	10,840	1,170	738	568	3,325	1,941	3,229	......
1850	2,175	11,694	11,776	1,006	868	585	4,202	2,473	2,935	......
1851	2,634	12,408	11,515	851	696	506	5,013	2,829	2,733	......
1852	2,649	12,687	12,247	976	849	648	3,468	3,645	2,338	......
1853	2,820	13,058	11,988	849	541	534	3,208	5,795	2,554	......
1854	3,219	11,136	9,958	862	493	603	3,975	3,967	4,006	872
1855	2,377	8,676	9,501	881	552	554	3,958	4,196	3,344	588
1856	2,605	7,713	11,996	696	527	503	3,566	2,818	3,993	783

1857	1,724	6,128	8,017	576	444	507	3,441	3,213	4,273	611
1858	1,603	6,859	8,097	435	398	461	3,164	2,923	3,945	617
1859	1,361	6,184	7,349	579	479	453	3,167	3,194	3,808	547
1860	2,439	7,524	10,344	541	433	463	3,225	2,883	4,017	......
1861	2,695	6,710	9,358	607	637	534	3,171	2,761	4,728	......
1862	1,311	8,301	11,233	557	518	466	3,148	2,873	5,044	......
1863	1,376	7,242	11,065	509	448	448	3,272	2,981	4,054	......
1864	2,279	6,011	8,649	415	343	345	2,913	2,444	3,500	......
1865	2,787	5,377	7,417	577	316	367	3,054	2,479	3,406	......
1866	3,079	6,392	7,829	644	305	376	3,436	2,957	3,365	......
1867	2,765	6,176	8,578	556	341	362	3,055	2,390	3,712	......
1868	3,052	6,000	7,649	672	384	342	3,003	2,524	4,024	......
1869	2,693	5,685	7,001	676	373	366	3,719	2,701	4,224	......
1870	2,376	5,851	8,331	912	474	370	3,722	2,728	4,459	......
1871	2,473	6,196	7,474	885	419	328	2,408	2,746	4,753	......
1872	4,174	6,111	8,080	985	343	314	2,307	2,551	4,234	......
1873	3,541	5,165	8,098	1,068	393	360	1,977	1,198	5,440	......
1874	2,797	5,228	7,378	857	381	347	2,334	1,865	3,860	......
1875	2,735	3,918	6,425	577	461	272	1,664	1,499	3,430	......
1876	2,319	3,852	6,805	649	448	320	1,202	1,478	3,289	......
1877	4,530	4,361	6,893	......	......	......	1,306	1,361	4,016	......
1878	4,921	5,321	8,182	......	......	......	1,037	1,393	2,975	......
1879	5,777	4,620	7,128	......	......	......	1,020	1,449	3,120	......
1880	6,733	5,478	8,938	......	......	......	1,190	1,545	3,644	......
1881	......	5,515	9,389	......	......	......	2,312	......	3,657	......
1882	......	6,194	10,033	......	......	......	2,397	......	3,798	......

STATEMENT No. 46 — (*Continued.*)

YEAR.	ERIE CANAL.								
	Montezuma.	Lyons.	Palmyra.	Rochester.	Brockport.	Albion.	Medina.	Lockport.	Tonawanda.
1833	2,721	560	638	3,270	841	588	......	782	....
1834	4,660	750	810	4,479	1,018	579	......	924	....
1835	2,340	621	564	4,347	865	586	......	1,230	....
1836	5,441	479	602	4,880	700	437	......	1,060	....
1837	4,682	852	597	4,902	598	597	......	719	....
1838	4,732	615	604	4,379	459	414	......	616	....
1839	4,964	623	681	4,401	546	519	......	872	....
1840	4,988	779	1,169	5,940	625	618	......	687	....
1841	5,336	621	762	6,080	581	750	......	1,423	....
1842	3,927	536	877	6,064	702	876	......	1,113	....
1843	4,034	417	632	5,893	611	744	......	1,162	....
1844	4,350	237	429	5,819	479	481	......	1,002	....
1845	5,036	373	605	6,320	500	545	......	1,188	....
1846	5,179	502	654	7,524	554	646	......	1,452	....
1847	5,720	529	731	8,630	600	731	......	1,545	....
1848	6,111	715	748	7,800	1,076	661	......	2,001	....
1849	4,234	501	683	6,907	3,167	697	......	1,741	....
1850	4,049	444	723	5,642	1,228	748	......	2,060	1,331
1851	3,994	561	729	6,286	874	696	715	1,612	1,979
1852	3,941	502	677	5,476	934	458	728	1,379	2,254
1853	4,183	426	556	5,054	846	283	802	1,283	1,951
1854	5,937	496	432	4,710	466	446	681	1,029	1,607
1855	5,359	550	355	3,861	749	551	1,382	1,103	1,858
1856	4,756	379	464	3,785	588	270	866	889	1,486
1857	4,274	375	370	3,033	413	265	840	861	1,356
1858	3,120	377	361	3,506	383	295	662	878	1,018
1859	3,455	471	415	3,164	419	284	598	819	857

1860	3,787	415	432	3,680	428	444	512	1,030	1,126
1861	3,792	454	362	3,519	386	353	390	998	899
1862	4,441	......	534	3,954	197	400	......	1,030	997
1863	4,735	......	566	4,245	529	462	......	1,304	1,074
1864	4,422	......	433	2,716	383	272	......	1,233	1,084
1865	4,316	......	400	2,225	329	310	......	966	854
1866	5,209	......	423	2,584	247	285	......	977	863
1867	4,572	......	450	2,199	375	339	......	932	896
1868	5,989	......	462	2,769	346	308	......	943	895
1869	5,842	......	513	1,857	301	354	441	732	1,025
1870	6,458	......	567	1,857	334	317	545	746	1,073
1871	5,808	......	550	1,917	365	347	652	789	1,054
1872	6,640	......	472	1,880	292	264	422	623	1,065
1873	7,486	......	625	2,449	349	351	588	897	1,485
1874	5,924	......	627	1,674	371	357	577	936	1,838
1875	4,792	......	496	1,340	344	369	416	652	1,559
1876	4,342	......	423	1,426	377	335	373	511	1,932
1877	2,832	......	......	1,480	......	......	......	......	2,375
1878	2,829	......	......	1,143	......	......	......	......	2,358
1879	2,239	......	......	858	......	......	......	......	2,758
1880	2,447	......	248	972	......	......	......	......	2,921
1881	......	......	......	1,479	......	......	......	......	3,422
1882	......	......	......	1,320	......	......	......	......	3,998

STATEMENT No. 46—(*Continued.*)

YEAR	ERIE.			CHAMPLAIN.					
	Black Rock.	Buffalo.	Total.	Waterford & Sloop lock.	Schuyler-ville.	Fort Edward.	Glens Falls.	Whitehall.	Total.
1833	....	2,774	37,571	2,616	1,349	....	....	2,869	6,834
1834	....	4,008	45,662	3,484	1,498	....	....	3,245	8,228
1835	....	5,173	49,308	3,564	1,606	....	....	3,957	8,127
1836	....	5,816	48,773	2,880	1,580	....	....	3,867	8,325
1837	....	4,755	45,051	1,771	1,414	....	....	3,034	6,319
1838	....	5,970	46,342	1,462	1,411	....	....	3,290	6,163
1839	979	5,013	49,392	1,538	1,493	....	....	3,356	6,387
1840	956	4,851	50,959	952	1,285	....	....	3,802	6,039
1841	1,459	5,682	53,193	1,416	1,653	....	....	3,534	6,603
1842	1,149	5,174	47,959	706	1,434	....	....	3,275	4,709
1843	1,222	5,994	48,942	820	1,242	....	....	3,061	4,303
1844	2,493	6,900	51,609	939	1,401	....	....	3,509	4,911
1845	1,377	6,375	55,190	1,045	1,605	....	....	3,523	5,128
1846	1,535	8,212	60,743	1,415	1,675	....	....	3,515	6,605
1847	1,831	11,136	72,801	1,100	1,759	....	....	4,078	6,937
1848	1,145	9,407	66,462	1,295	1,540	....	....	3,619	6,454
1849	1,504	9,132	60,769	866	775	....	866	3,849	5,996
1850	937	9,805	64,732	814	702	....	1,013	4,429	6,958
1851	999	10,380	68,120	807	908	....	1,101	3,950	6,766
1852	1,243	9,662	66,760	1,205	1,089	....	1,274	4,146	7,714
1853	1,517	9,248	67,497	1,644	1,108	....	1,612	5,501	9,865
1854	1,047	9,833	65,875	1,176	1,123	....	1,515	3,967	7,781
1855	1,134	9,874	61,405	1,122	1,264	....	1,210	3,825	7,421
1856	1,143	7,982	57,828	860	1,131	....	1,585	4,049	7,625
1857	....	6,455	47,176	1,929	1,118	....	1,314	3,393	7,754
1858	....	6,306	45,408	2,813	....	2,543	....	3,451	8,807

1859	......	4,839	42,442	3,160	......	2,691	......	4,041	9,892
1860	......	7,541	51,264	3,658	......	2,576	......	4,061	10,295
1861	......	9,584	51,938	2,796	......	2,487	......	2,539	7,822
1862	......	11,185	56,189	3,704	......	2,341	......	3,573	9,618
1863	......	9,556	53,861	3,643	......	2,864	......	4,361	10,868
1864	......	7,943	45,385	3,473	......	2,760	......	4,099	10,332
1865	......	6,944	42,124	2,668	......	2,632	......	4,016	9,336
1866	......	8,519	47,490	3,600	......	2,791	......	4,979	11,370
1867	......	7,664	45,362	5,184	......	2,784	......	5,179	13,147
1868	......	7,761	47,123	3,916	......	3,228	......	4,812	11,956
1869	......	6,725	45,228	4,564	......	2,632	......	4,671	11,867
1870	......	6,835	47,953	3,718	......	2,380	......	5,356	11,454
1871	......	8,795	48,959	4,651	......	2,713	......	5,015	12,379
1872	......	8,659	49,416	4,528	......	3,040	......	5,870	13,438
1873	......	9,063	51,473	3,681	......	2,204	......	4,929	10,814
1874	......	7,643	44,994	3,591	......	2,494	......	3,967	10,052
1875	......	6,365	37,284	3,261	......	2,116	......	3,877	9,254
1876	......	4,850	34,931	2,464	......	1,807	......	3,283	7,554
1877	......	6,938	36,092	2,002	......	2,010	......	3,535	7,547
1878	......	9,047	39,206	2,248	......	2,349	......	3,390	7,987
1879	......	8,708	37,677	2,244	......	1,701	......	3,856	7,801
1880	......	10,623	44,739	2,462	......	1,995	......	4,868	9,325
1881	......	6,317	32,091	3,237	......	......	......	3,858	7,095
1882	......	6,613	34,353	3,713	......	......	......	3,949	7,662

STATEMENT No. 46 —(*Continued.*)

YEAR.	OSWEGO.				CAYUGA AND SENECA.			
	Salina.	**Phœnix.**	**Oswego.**	**Total.**	**Seneca Falls.**	**Geneva.**	**Ithaca.**	**Total.**
1833	2,825	......	914	3,739	......	1,086	......	....
1834	5,230	......	1,637	6,867	......	1,894	......	....
1835	5,488	......	2,275	7,763	......	1,692	......	....
1836	4,842	......	2,028	6,870	......	1,730	......	....
1837	4,878	......	1,773	6,651	......	1,385	......	....
1838	5,782	......	2,082	7,864	......	1,361	......	....
1839	6,071	......	2,385	8,456	......	1,213	......	....
1840	5,492	......	1,980	7,472	......	1,223	......	....
1841	6,286	......	2,839	9,125	......	1,421	......	....
1842	4,530	......	2,343	6,877	......	1,397	......	....
1843	5,544	......	2,407	7,447	......	1,068	......	....
1844	6,841	......	3,363	10,204	......	1,249	......	....
1845	6,877	......	3,419	10,296	......	1,449	......	....
1846	9,169	......	3,898	11,067	......	1,881	......	....
1847	8,172	......	4,666	12,838	......	1,814	......	....
1848	8,299	......	4,177	12,406	......	1,632	......	....
1849	3,933	......	3,928	7,861	......	269	......	....
1850	3,773	......	3,978	7,551	......	289	......	....
1851	3,298	......	4,773	8,071	......	1,036	......	....
1852	3,050	......	5,794	7,884	......	954	......	....
1853	3,298	......	5,831	9,129	......	1,016	......	....
1854	5,943	2,372	5,001	13,316	1,002	855	......	1,857
1855	5,463	2,293	5,092	12,848	1,120	851	......	1,971
1856	5,857	2,137	6,833	14,827	845	562	1,032	2,439
1857	4,390	1,414	4,329	10,133	545	640	912	2,097
1858	6,533	1,888	5,117	13,538	594	770	376	1,740
1859	5,667	1,371	3,988	11,026	543	834	341	1,708

1860	6,050	1,985	6,263	14,298	878	1,091	......	1,969
1861	5,720	1,470	5,306	12,496	634	1,017	......	1,651
1862	6,542	1,576	5,483	13,601	......	1,508	......	1,508
1863	6,020	1,258	4,720	11,998	......	1,192	......	1,192
1864	4,528	959	3,767	9,254	......	1,533	......	1,533
1865	4,510	1,011	3,798	9,319	......	2,071	......	2,071
1866	5,136	883	4,273	10,992	......	2,464	......	2,464
1867	4,354	789	4,021	9,164	......	2,385	......	2,385
1868	4,415	813	4,129	9,357	......	3,414	......	3,414
1869	3,832	620	4,012	8,464	......	3,435	......	3,435
1870	3,522	676	3,955	8,153	......	3,217	......	3,217
1871	3,395	692	3,907	7,994	......	2,786	......	2,786
1872	3,710	529	3,303	7,542	......	2,572	......	2,572
1873	3,236	520	2,929	6,685	......	2,648	......	2,648
1874	2,980	564	2,877	6,421	......	2,136	......	2,136
1875	2,007	452	2,035	4,494	......	1,392	......	1,392
1876	2,181	......	1,717	3,898	......	853	......	853
1877	......	......	1,902	1,902	......	1,700	......	1,700
1878	......	......	1,516	1,516	......	1,091	......	1,091
1879	......	......	1,803	1,803	......	751	......	751
1880	......	......	2,241	2,241	......	817	......	817
1881	......	......	2,075	2,075	......	717	......	717
1882	......	......	2,200	2,200	......	745	......	745

STATEMENT No. 46—(*Continued.*)

YEAR.	CHEMUNG.					CROOKED LAKE.			CHENANGO.			
	Havana.	Watkins.	Horse-heads.	Corning.	Total.	Dresden.	Penn Yan	Total.	Hamilton	Oxford.	Bingham-ton.	Total.
1833	82	......	170	......	1,253	153	......	153	......	......	......	......
1834	662	......	595	......	1,247	406	490	896	......	......	......	......
1835	911	......	851	......	1,892	424	651	1,075	......	......	......	......
1836	1,000	......	951	......	1,951	512	667	1,779	......	......	......	......
1837	967	......	737	......	1,704	448	550	998	183	167	162	517
1838	879	......	741	......	1,620	437	521	958	399	304	366	1,069
1839	895	......	729	......	1,624	403	527	930	303	369	208	880
1840	798	......	755	......	1,553	111	403	814	228	298	237	763
1841	1,153	......	1,442	......	3,595	414	476	890	316	422	301	1,039
1842	1,013	......	1,348	......	3,361	413	318	731	252	358	205	815
1843	1,119	......	1,350	......	3,468	448	516	964	344	343	281	968
1844	1,371	......	1,679	......	3,050	447	529	976	262	509	357	1,128
1845	1,534	......	1,134	......	3,696	624	571	1,195	258	491	440	1,189
1846	1,515	......	1,314	1,028	3,699	778	500	1,278	263	430	514	1,207
1847	1,941	......	1,339	870	4,440	750	510	1,300	425	502	550	1,447
1848	1,884	......	1,457	1,152	4,569	555	589	1,184	546	493	506	1,545
1849	1,714	......	1,024	1,228	3,843	559	466	1,025	335	335	319	989
1850	1,714	......	914	1,105	3,839	560	482	1,042	348	512	435	1,295
1851	1,702	......	890	1,211	3,828	505	411	916	274	322	311	907
1852	1,814	......	946	1,235	3,999	418	409	827	486	462	623	1,603
1853	2,224	......	1,174	1,621	5,019	458	458	916	588	372	802	1,762
1854	2,772	......	1,700	2,158	6,630	371	334	705	496	482	921	1,899
1855	2,218	......	1,234	1,815	5,267	367	393	768	697	405	852	1,954
1856	2,548	......	1,697	1,737	5,082	385	367	752	613	438	872	1,923
1857	2,343	......	1,624	1,542	5,509	......	261	261	601	487	818	1,906
1858	2,230	......	1,737	1,138	5,105	......	334	334	403	429	700	1,532

1859	3,027	......	2,346	1,217	6,590	......	355	355	603	440	1,014	2,057
1860	2,376	......	2,052	1,021	5,449	......	277	277	493	418	984	1,895
1861	2,537	......	2,149	754	5,440	......	219	219	473	468	1,027	1,968
1862	2,891	......	1,854	1,039	5,784	......	388	388	372	385	962	1,719
1863	3,572	......	1,817	1,442	6,831	......	318	318	392	447	1,049	1,888
1864	2,966	......	1,530	1,553	6,049	......	154	154	512	494	1,029	2,035
1865	1,888	......	1,028	730	3,646	......	282	282	451	481	807	1,739
1866	2,445	......	1,975	456	4,876	......	364	364	541	509	1,238	2,288
1867	1,660	......	1,184	617	3,461	......	217	217	547	546	1,344	2,437
1868	......	1,191	789	461	2,441	......	224	224	546	598	1,488	2,632
1869	......	1,591	778	408	2,777	......	209	209	437	639	1,802	2,158
1870	......	1,400	445	283	2,128	......	236	236	551	503	1,306	2,360
1871	......	1,479	412	276	2,167	......	210	210	294	141	463	898
1872	......	1,447	571	338	2,356	......	117	117	214	169	271	654
1873	......	1,562	360	258	2,180	......	201	201	229	269	280	778
1874	......	1,441	247	197	1,885	......	130	130	179	214	287	680
1875	......	896	......	144	1,040	......	......	......	......	......	244	244
1876	......	1,164	......	221	1,285	......	......	......	......	177	......	177
1877	......	......	......	116	116	......	......	......	......	......	......	......
1878	......	......	......	87	87	......	......	......	......	......	......	......
1879	......	......	......	......	......	......	......	......	......	......	......	......
1880	......	......	......	......	......	......	......	......	......	......	......	......
1881	......	......	......	......	......	......	......	......	......	......	......	......
1882	......	......	......	......	......	......	......	......	......	......	......	......

STATEMENT No. 46 — (*Continued*).

YEAR.	GENESEE VALLEY.							BLACK RIVER.			ONEIDA LAKE.	SENECA R. TOWING PATH.	Total.
	Scottsville.	Mt. Morris.	Dansville.	Oramel.	Caneadea.	Olean.	Total.	Boonville.	Lyons Falls.	Total.	Higgins.	Baldwinsville.	
1833	......	......	......	....	....	....	......	......	....	......	......	......	49,636
1834	......	......	......	....	....	....	......	......	....	......	......	......	64,494
1835	......	......	......	....	....	....	......	......	....	......	......	......	69,767
1836	......	......	......	....	....	....	......	......	....	......	......	......	68,830
1837	......	......	......	....	....	....	......	......	....	......	......	......	62,525
1838	......	......	......	....	....	....	......	......	....	......	......	......	65,377
1839	......	......	......	....	....	....	......	......	....	......	......	......	68,882
1840	478	......	......	....	....	....	574	......	....	......	......	......	69,301
1841	1,096	......	......	....	....	....	1,096	......	....	......	574	......	76,526
1842	1,034	......	531	....	....	....	1,565	......	....	......	1,101	......	67,515
1843	1,217	......	592	....	....	....	1,807	......	....	......	1,250	......	69,720
1844	1,297	......	748	....	....	....	2,045	......	....	......	1,237	......	76,409
1845	1,411	......	812	....	....	....	2,223	......	....	......	1,260	......	81,629
1846	1,474	......	892	....	....	....	2,366	......	....	......	1,089	......	89,933
1847	1,309	......	974	....	....	....	2,283	......	....	......	1,307	......	105,198
1848	1,284	......	1,105	....	....	....	2,389	......	....	......	1,677	......	98,325
1849	1,084	......	1,078	....	....	....	2,162	......	....	......	2,304	......	75,648
1850	1,210	......	1,015	....	....	....	2,225	......	....	......	393	......	29,184
1851	428	355	1,025	329	....	....	2,037	530	....	530	695	......	92,926
1852	555	261	728	270	....	....	2,014	609	....	609	1,187	......	93,842
1853	714	983	686	514	....	....	2,897	674	....	674	1,073	......	109,148
1854	614	1,166	453	935	....	....	2,968	817	....	817	2,563	491	104,902
1855	432	1,093	441	468	....	....	2,434	933	....	933	2,393	470	97,856
1856	509	1,008	379	439	....	....	2,333	834	....	834	3,177	494	98,214
1857	402	1,049	319	482	....	153	2,405	900	....	900	1,284	......	79,425

1858	338	951	289	415	....	321	2,314	868	....	868	1,339	......	80,985
1859	369	827	276	404	....	342	2,233	989	....	989	1,072	......	78,354
1860	349	692	259	....	434	429	2,163	904	....	904	672	......	89,186
1861	293	576	147	....	367	328	1,711	917	....	917	472	......	84,634
1862	......	882	181	....	527	556	2,146	1,019	....	1,019	.....	......	91,972
1863	......	694	140	....	548	570	1,952	1,157	....	1,157	......	......	90,065
1864	......	485	132	....	363	335	1,315	924	....	924	......	......	76,981
1865	......	477	112	....	278	134	1,001	931	....	331	......	......	70,449
1866	......	473	151	....	435	378	1,437	1,153	....	1,153	......	......	81,734
1867	......	392	121	....	403	259	1,178	1,065	....	1,065	......	......	78,416
1868	......	577	132	....	503	407	1,619	818	313	1,131	......	......	79,897
1869	......	565	125	....	298	297	1,285	795	440	1,235	......	......	76,658
1870	......	435	142	....	392	468	1,437	776	577	1,353	......	......	78,291
1871	......	344	137	....	323	500	1,304	577	604	1,181	......	......	77,878
1872	......	433	119	....	400	492	1,444	599	668	1,267	......	......	78,806
1873	......	567	128	....	415	466	1,576	427	590	1,017	......	......	77,372
1874	......	582	......	...	312	371	1,265	835	....	835	......	......	68,398
1875	......	461	......	....	....	405	866	754	....	754	......	......	55,328
1876	......	435	......	....	....	286	721	824	....	824	......	......	50,243
1877	......	365	......	....	....	216	581	734	....	734	......	......	48,672
1878	......	249	......	....	....	117	366	776	....	776	......	......	51,029
1879	......	......	......	....	....	....	......	873	....	873	......	......	48,905
1880	......	......	......	....	....	....	.....	1,039	....	1,039	......	....	58,161
1881	......	.....	......	....	....	....	......	1,098	....	1,098	......	......	43,076
1882	......	......	......	....	...	....	......	1,224	....	1,224	......	......	46,184

(No. 47.)

The number of clearances issued from 1833 *to* 1881, ***both inclusive, is as follows:***

YEAR.	FROM TIDE WATER.				OTHER CLEARANCES.			
	New York.	Albany.	West Troy.	Total.	Erie.	Champlain.	Oswego.	Cayuga and Seneca.
1833	....	8,932	6,798	15,730	21,841	5,938	3,739	1,086
1834	....	9,283	6,942	16,225	29,441	7,159	6,867	1,891
1835	....	10,967	7,378	18,345	30,963	7,438	7,768	1,693
1836	....	10,235	6,801	17,035	31,837	7,752	6,870	1,730
1837	....	9,147	9,393	17,540	29,511	5,967	6,651	1,335
1838	....	9,530	6,530	16,060	30,282	5,582	7,364	1,361
1839	....	8,331	7,607	16,938	33,454	5,804	8,456	1,213
1840	....	8,860	6,868	15,728	35,231	5,871	7,472	1,223
1841	....	9,620	7,170	16,799	36,333	6,067	9,125	1,421
1842	....	9,293	7,143	16,436	31,529	4,709	6,878	1,397
1843	....	8,606	7,813	16,413	32,529	4,303	7,948	1,068
1844	....	10,345	9,048	19,393	32,216	4,911	10,204	1,249
1845	....	10,240	9,811	20,051	35,142	5,128	10,296	1,449
1846	989	10,171	10,308	21,468	93,276	6,605	11,067	1,881
1847	1,560	12,631	11,630	25,827	46,255	6,937	12,838	1,814
1848	1,141	10,501	11,008	22,640	43,829	6,454	12,406	1,932
1849	1,502	10,920	10,840	23,262	37,507	6,996	7,861	969
1850	2,177	11,694	11,746	25,617	39,115	6,958	7,751	886
1851	2,634	12,408	11,515	26,557	41,563	6,766	8,071	1,056
1852	2,649	12,687	12,247	27,583	39,177	7,714	7,844	954
1853	2,820	13,058	11,988	27,866	39,621	9,865	9,129	1,016
1854	3,319	11,136	9,958	24,413	41,461	7,781	13,518	1,857
1855	2,377	8,677	9,503	20,565	40,850	7,421	12,248	1,971
1856	2,605	7,713	11,961	22,314	35,514	7,625	14,827	2,439

1857	1,724	6,128	8.017	15,869	31,307	7,754	10,133	2,097
1858	1,603	6,859	8,097	16,559	28,849	8,807	13,538	1,740
1859	1,361	6,184	7,349	14,894	27,548	9,892	11,026	1,708
1860	2,439	7,524	10,344	20,307	30,957	10,295	14,298	1,969
1861	2,695	6,710	9,358	18,763	33,175	7,822	11,496	1,651
1862	1,311	8,301	11,233	20,845	35,344	9,618	13,601	1,508
1863	1,376	7,242	11,065	19,683	34,178	10,868	11,998	1,192
1864	2,279	6,011	8,649	16,939	28,446	10,332	9,254	1,533
1865	2,787	5,377	7,417	15,581	26,543	9,336	9,319	2,071
1866	3,079	6,392	7.829	17,300	30,190	11,370	10,292	2.464
1867	2,765	6,176	8,578	17,519	27,843	13,147	9,164	2,385
1868	3,052	6,000	7,649	16,701	30,422	11,956	9,357	3,414
1869	2,693	5,685	7,001	15,379	29,849	11,867	8,464	3,435
1870	2,376	5,851	8,331	16,558	31,395	11,454	8,153	3,217
1871	3,473	6,196	7,474	17,143	31,816	12,379	7,994	2,786
1872	4,174	6,111	8,080	18,365	49,416	13,438	7,542	2,572
1873	3,541	5,165	8,098	16,804	51.473	10,814	6,685	2,648
1874	2,797	5,228	7,378	15,403	44,994	10,052	6,421	2,136
1875	2,735	3,918	6,425	13,078	24,206	9,254	4,494	1,392
1876	2,319	3,852	6,805	12,976	21,955	7,554	3,898	853
1877	4,530	4,361	6,893	15,784	20,308	7,547	1,902	1,700
1878	4,921	5,321	8,182	18,424	20,782	7,987	1,516	1,091
1879	5,777	4,620	7,128	17,525	20,152	7,801	1,803	751
1880	6,733	5,478	8,938	21,149	23,590	9,325	2,241	817
1881	......	5,515	9,389	14,904	17,187	7,096	2,075	717
1882	......	6,194	10,033	16,227	18,126	7,662	2,200	745

STATEMENT No. 47 — (*Continued.*)

YEAR.	OTHER CLEARANCES.								
	Chemung.	Crooked Lake.	Chenango.	Genesee Valley.	Black River.	Higgins.	Baldwinsville.	Total.	Total for all clearances.
1833	253	153	......	......	......	......	......	33,010	48,740
1834	1,247	896	......	......	......	......	......	47,501	63,726
1835	1,802	1,075	......	......	......	......	......	50,733	69,078
1836	1,951	1,179	......	......	......	......	......	50,219	67,255
1837	1,704	998	517	......	......	......	......	46,733	62,273
1838	1,629	958	1,069	......	......	......	......	48,736	64,796
1839	1,624	930	880	......	......	......	......	52,358	68,296
1840	1,553	814	762	478	......	......	......	53,405	69,133
1841	2,595	890	1,039	2,096	......	574	......	59,200	75,990
1842	3,861	731	815	1,595	......	1,101	......	51,079	67,515
1843	2,469	964	968	1,809	......	1,250	......	53,307	69,720
1844	3,050	976	1,128	2,045	......	1,237	......	57,016	76,409
1845	3,696	1,495	1,189	2,223	......	1,260	......	61,578	81,629
1846	3,699	1,278	1,207	2,366	......	1,089	......	68,468	89,936
1847	4,440	1,300	1,477	2,283	......	1,307	......	78,651	104,478
1848	4,569	1,184	1,545	2,389	......	1,677	......	75,685	97,325
1849	3,843	1,025	989	2,162	......	2,034	......	62,386	85,648
1850	3,830	1,042	1,295	2,225	......	393	......	63,507	89,124
1851	3,828	916	907	2,037	530	965	......	66,369	92,926
1852	3,999	827	1,603	2,014	609	1,187	......	66,259	93,842
1853	5,019	916	1,762	2,897	674	1,374	......	72,572	100,148
1854	6,630	705	1,899	2,968	817	2,563	491	80,489	104,902
1855	4,267	760	1,954	2,434	933	2,393	470	77,301	97,850
1856	5,982	752	1,923	2,333	834	3,177	494	75,900	98,214
1857	5,509	261	1,906	2,405	900	1,284	......	63,556	79,425
1858	5,105	334	1,532	2,314	868	1,339	......	64,426	80,985

1859	6,590	355	2,057	2,223	989	1,072	......	63,460	78,354
1860	5,449	277	1,895	2,163	904	672	......	68,879	89,186
1861	5,440	219	1,968	1,711	917	472	......	65,871	84,634
1862	5,740	388	1,719	2,146	1,019	......	......	71,127	91,972
1863	6,831	318	1,888	1,952	1,157	......	......	70,382	90,065
1864	6,049	154	2,035	1,315	924	......	......	60,042	76,981
1865	3,646	282	1,739	1,001	931	......	......	54,868	70,449
1866	4,876	364	2,288	1,437	1,153	......	......	64,434	81,734
1867	3,461	217	2,437	1,178	1,065	......	......	60,897	78,416
1868	2,441	224	2,632	1,619	1,131	......	......	63,196	79,897
1869	2,777	209	2,158	1,285	1,235	......	......	61,279	76,658
1870	2,128	236	2,360	1,437	1,353	......	......	61,733	78,291
1871	2,167	210	898	1,304	1,181	......	......	60,735	77,878
1872	2,356	117	654	1,444	1,267	......	......	60,441	78,806
1873	2,180	201	778	1,576	1,017	......	......	60,568	77,372
1874	1,885	130	680	1,265	835	......	......	52,995	68,398
1875	1,040	......	244	866	754	......	......	42,250	55,228
1876	1,285	......	177	721	824	......	......	37,267	50,243
1877	116	......	......	581	734	......	......	32,888	48,672
1878	87	......	......	366	776	......	......	32,605	51,029
1879	......	......	......	......	873	......	......	31,380	48,905
1880	......	......	......	......	1,039	......	......	37,012	58,161
1881	......	......	......	......	1,098	......	......	28,172	43,076
1882	......	......	......	......	1,224	......	......	29,957	46,184

(No. 48.)

STATEMENT of ***the tons*** *of property moved on each and all the canals, comprising the tons of total movement.*

YEAR.	Erie.	Champlain.	Oswego.	Cayuga and Seneca.	Chemung.	Crooked Lake.
1837	**667,151**	261,659	161,353	20,274	20,288	24,258
1838	**744,848**	266,553	222,697	23,541	30,256	30,336
1839	845,007	263,552	221,014	26,300	36,089	26,823
1840	829,960	245,229	219,627	32,486	34,217	24,026
1841	906,442	276,418	135,689	34,634	63,042	33,030
1842	712,310	230,844	129,498	31,716	54,866	18,660
1843	819,216	262,212	240,571	25,998	66,247	31,856
1844	945,944	269,546	326,607	31,099	88,231	32,589
1845	1,038,700	266,922	340,481	46,464	114,740	39,489
1846	1,264,408	280,480	351,511	61,014	124,768	35,556
1847	1,661,575	313,124	441,096	58,204	189,165	36,318
1848	1,599,965	293,889	490,147	46,252	150,691	34,155
1849	1,622,444	321,345	557,637	40,440	135,867	36,317
1850	1,635,089	460,219	583,346	42,379	128,263	38,797
1851	1,955,265	513,793	676,321	37,084	150,563	29,309
1852	2,129,334	531,001	684,191	47,275	187,577	35,757
1853	2,196,308	608,354	761,276	58,793	249,980	53,985
1854	2,224,008	602,913	611,533	72,995	270,978	25,349
1855	2,202,463	537,108	654,399	76,744	223,271	25,850
1856	2,107,678	611,610	657,381	131,907	245,621	28,559
1857	1,566,624	547,236	605,218	120,435	187,201	16,571
1858	1,767,004	608,918	688,960	75,968	205,168	16,318
1859	1,753,954	751,046	612,390	80,602	256,323	17,933
1860	2,253,533	681,157	1,080,076	98,678	226,051	14,723
1861	2,500,782	545,930	852,920	100,992	208,792	12,239
1862	3,204,277	647,318	1,063,413	125,659	243,628	19,632
1863	2,955,302	878,920	992,173	119,704	307,151	11,230

1864	2,535,792	846,790	765,097	135,161	280,834	6,316
1865	2,523,490	815,311	825,649	192,312	164,796	9,376
1866	2,896,027	1,001,493	990,809	368,233	226,510	12,189
1867	2,920,578	1,047,440	940,136	389,704	145,627	6,558
1868	3,346,986	1,120,585	958,444	515,295	165,875	4,451
1869	2,845,072	1,059,334	934,638	533,516	245,761	7,541
1870	3,083,132	1,143,719	917,728	527,728	206,535	15,825
1871	3,580,922	1,099,995	941,858	445,186	173,281	12,024
1872	3,562,560	1,449,528	832,490	386,977	217.263	7,145
1873	3,602,535	1,195,390	655,588	437,382	257,962	12,831
1874	3,097,122	1,268,292	665,408	378,825	205,602	9,286
1875	2,787,226	1,077,746	486,530	224,492	129,425	....
1876	2,418,422	910,151	370,330	137,264	214,448	....
1877	3,254,367	1,021,782	319,327	247,864	12,026	....
1878	3,608,634	1,040,912	257,254	168,201	8,767	....
1879	3,820,027	1,012,005	333,713	117,027	....	....
1880	4,608,651	1,200,503	427,863	125,331	....	....
1881	3,598,721	986,079	394,542	99,617	....	....
1882	3,694,364	1,097,343	445,295	123,488	....	....

STATEMENT No. 48—(*Continued.*)

YEARS.	Chenango.	Genesee Valley.	Black River.	Oneida Lake.	Baldwinsville.	Total.
1837	8,213	....	....	....	....	1,171,296
1838	14,778	....	....	....	....	1,333,011
1839	16,928	....	....	....	....	1,435,713
1840	16,848	13,653	....	....	....	1,416,046
1841	23,356	26,892	....	22,150	....	1,521,661
1842	17,177	41,860	....	....	....	1,236,931
1843	19,026	48,313	....	26,445	....	1,513,439
1844	31,472	65,077	....	25,991	....	1,816,586
1845	38,305	73,546	....	28,808	....	1,977,565
1846	41,112	87,615	....	22,188	....	2,268,662
1847	44,051	95,632	....	30,642	....	2,869,810
1848	35,207	98,467	....	47,451	....	2,796,230
1849	36,557	84,674	....	59,451	....	2,894,732
1850	41,892	89,804	....	56,828	....	3,076,617
1851	40,307	100,722	25,320	45,049	....	3,582,733
1852	44,939	122,901	36,497	43,969	....	3,863,441
1853	76,538	157,164	41,924	43,351	....	4,247,853
1854	77,142	158,942	55,525	34,532	31,945	4,165,862
1855	89,390	102,321	51,347	27,116	32,608	4,022,617
1856	105,502	113,731	68,126	18,485	27,481	4,116,082
1857	96,722	114,576	69,135	19,343	....	3,344,061
1858	72,526	118,303	62,352	19,675	....	3,665,192
1859	89,691	124,263	75,946	19,536	....	3,781,684
1860	83,035	123,602	70,687	18,672	....	4,650,214
1861	91,661	94,329	69,930	30,060	....	4,507,635
1862	79,442	129,974	85,442	....	....	5,598,785
1863	90,215	112,549	90,448	....	....	5,557,692
1864	89,021	71,411	72,519	....	....	4,852,941

1865	68,822	56,581	73,317	....	....	4,729,654
1866	107,472	86,579	85,908	....	....	5,795,220
1867	103,064	64,679	70,539	....	....	5,688,325
1868	112,455	138,364	79,770	....	....	6,442,225
1869	83,527	69,141	80,550	....	....	5,859,080
1870	102,820	79,733	96,329	....	....	6,173,769
1871	39,793	85,269	89,560	....	....	6,467,888
1872	26,519	96,112	94,776	....	....	6,673,370
1873	30,317	86,770	86,017	....	....	6,364,782
1874	33,059	69,393	77,601	....	....	5,804,588
1875	23,769	64,677	65,993	....	....	4,859,858
1876	6,227	47,360	67,927	....	....	4,172,129
1877	....	37,311	63,286	....	....	4,955,963
1878	....	18,569	68,983	....	....	5,171,320
1879	....	....	79,600	....	....	5,362,372
1880	....	....	75,308	....	....	6,457,656
1881	....	....	100,233	....	....	5,179,192
1882	....	....	106,933	....	....	5,467,423

---

* This amount is included in the account of property cleared from Rome and Syracuse, and will not appear in the general footing.

(No. 49.)

COMPARATIVE STATEMENT of the weekly receipts of tolls on the New York State canals, from 1849 *to* 1882, *both inclusive.*

PERIOD.	1849.	1850.	1851.	1852.	1853.
Received in April	....	$178,794	$297,898	$132,102	$185,003
1st week in May	$204,062	80,477	112,105	83,106	75,334
Total	....	259,271	410,003	215,208	260,337
2d week in May	136,615	103,989	112,457	103,718	94,292
Total	340,677	363,260	522,460	318,926	354,629
3d week in May	137,461	113,673	121,471	119,051	108,673
Total	478,138	476,933	643,931	437,977	463,302
4th week in May	136,972	121,393	129,399	107,223	130,259
Total	615,110	598,326	773,330	545,200	593,561
1st week in June	88,786	63,090	90,043	102,892	81,010
Total	703,896	661,416	863,373	648,092	674,571
2d week in June	90,242	67,329	86,223	90,303	108,378
Total	794,138	728,745	949,596	738,395	782,948
3d week in June	111,549	110,032	88,428	108,110	100,576
Total	905,687	838,777	1,038,024	846,505	883,525
4th week in June	107,850	83,707	91,296	103,410	104,827
Total	1,013,537	922,484	1,129,320	949,996	988,352
1st week in July	84,764	66,176	82,827	81,266	82,564
Total	1,098,301	988,660	1,212,147	1,031,262	1,071,214
2d week in July	76,845	66,751	85,819	88,681	97,961
Total	1,175,146	1,055,411	1,297,906	1,119,943	1,169,175
3d week in July	77,509	75,718	101,874	102,536	102,984
Total	1,252,655	1,131,129	1,399,840	1,222,479	1,272,159
4th week in July	82,905	105,217	120,536	115,051	115,833
Total	1,335,560	1,236,346	1,520,376	1,357,530	1,387,992
1st week in August	61,393	84,526	88,041	82,884	94,070
Total	1,396,958	1,320,872	1,608,417	1,429,414	1,472,062

2d week in August	66,422	84,485	93,704	95,937	85,747
Total	1,463,380	1,405,357	1,702,121	1,515,451	1,557,809
3d week in August	88,438	107,851	107,278	92,309	105,771
Total	1,551,818	1,512,208	1,809,399	1,607,760	1,663,580
4th week in August	114,265	150,592	128,848	129,278	131,756
Total	1,666,083	1,662,800	1,938,247	1,737,038	1,795,336
1st week in September	96,057	104,621	103,204	103,794	100,456
Total	1,762,140	1,767,421	2,041,451	1,840,792	1,895,792
2d week in September	105,239	120,888	107,249	101,805	98,902
Total	1,867,379	1,888,309	2,148,700	1,942,597	1,994,694
3d week in September	137,188	132,812	127,185	124,350	131,367
Total	2,004,567	2,021,121	2,275,885	2,066,947	2,126,061
4th week in September	132,783	137,063	122,656	128,970	105,025
Total	2,137,350	2,158,184	2,398,541	2,195,917	2,231,086
1st week in October	120,137	126,411	112,754	112,949	110,456
Total	2,257,487	2,284,595	2,511,295	2,308,966	2,341,542
2d week in October	131,626	107,339	118,230	121,078	129,947
Total	2,389,113	2,391,934	2,629,525	2,429,944	2,471,489
3d week in October	166,846	170,016	146,000	131,472	151,528
Total	2,555,959	2,561,950	2,775,525	2,561,416	2,623,017
4th week in October	187,924	161,406	160,945	144,886	132,306
Total	2,743,883	2,723,356	2,936,470	2,706,302	2,755,323
1st week in November	153,847	134,478	115,399	122,801	130,351
Total	2,897,730	2,857,834	3,051,869	2,829,103	2,885,674
2d week in November	144,576	166,122	119,969	116,025	119,980
Total	3,042,306	3,023,956	3,171,838	2,945,128	3,005,654
3d week in November	154,106	171,098	119,648	125,498	127,260
Total	3,196,412	3,195,054	3,291,486	3,070,626	3,132,914
4th week in November	62,487	61,025	36,274	31,098	55,854
Total	3,258,899	3,256,083	3,327,760	3,101,724	3,188,768
Received in December	9,307	17,816	1,967	16,520	15,950
Total for year	$3,268,206	$3,273,899	$3,329,727	$3,118,244	$3,204,718

STATEMENT No. 49—(*Continued*).

PERIOD.	1854.	1855.	1856.	1857.	1858.
Received in April	....	....	....	....	$38,945
1st week in May	$111,168	$83,934	$38,393	$11,550	75,912
Total	....	....	....	....	114,857
2d week in May	132,283	90,226	64,736	74,458	72,784
Total	243,451	174,160	103,129	86,008	187,641
3d week in May	128,577	93,440	65,555	64,836	86,446
Total	372,028	267,600	168,684	150,844	274,087
4th week in May	131,134	130,566	73,447	66,499	80,198
Total	503,162	398,166	242,131	217,343	354,285
1st week in June	105,595	96,850	79,093	56,742	71,808
Total	608,757	495,015	321,224	274,085	426,093
2d week in June	102,788	88,293	92,267	70,567	61,866
Total	711,545	583,309	413,491	344,652	487,979
3d week in June	101,139	104,204	103,578	86,714	75,672
Total	812,684	687,513	517,069	431,366	563,651
4th week in June	106,775	96,599	105,227	89,796	72,565
Total	919,459	774,112	622,296	521,162	636,216
1st week in July	73,894	75,737	82,460	56,015	58,000
Total	993,353	849,849	704,756	577,177	694,216
2d week in July	87,253	77,771	84,134	76,039	64,672
Total	1,080,806	927,620	788,890	653,216	758,888
3d week in July	86,339	78,887	87,536	77,049	72,898
Total	1,166,945	1,006,507	876,426	730,265	831,786
4th week in July	94,856	100,734	117,942	105,718	83,346
Total	1,261,801	1,107,242	1,994,368	835,983	915,132
1st week in August	74,040	79,960	88,009	81,771	79,616
Total	1,335,841	1,187,202	1,082,377	917,754	984,748
2d week in August	77,440	75,713	94,159	76,750	63,887
Total	1,413,281	1,263,915	1,176,536	984,504	1,048,635

3d week in August	87,089	91,509	94,980	80,695	63,297
Total	1,500,370	1,354,424	1,276,516	1,075,199	1,111,932
4th week in August	94,190	106,453	114,606	101,404	73,905
Total	1,514,560	1,460,877	1,386,122	1,176,603	1,185,832
1st week in September	89,584	95,552	105,555	78,464	59,389
Total	1,684,144	1,556,429	1,491,677	1,255,067	1,245,221
2d week in September	90,007	110,150	114,696	85,108	61,898
Total	1,774,151	1,666,579	1,606,373	1,340,175	1,307,119
3d week in September	111,638	123,789	139,920	76,563	82,467
Total	1,885,789	1,790,368	1,746,293	1,416,738	1,389,586
4th week in September	121,059	118,664	120,825	79,589	88,767
Total	2,006,848	1,909,032	1,867,118	1,496,327	1,478,353
1st week in October	99,586	115,297	97,986	52,104	81,723
Total	2,106,434	2,024,329	1,965,104	1,548,431	1,560,076
2d week in October	93,181	117,717	120,248	58,223	92,824
Total	2,199,615	2,142,046	2,085,352	1,606,654	1,652,940
3d week in October	102,328	134,989	139,431	80,898	108,035
Total	2,301,943	2,777,035	2,224,783	1,687,552	1,760,975
4th week in October	118,441	135,637	143,869	91,193	97,779
Total	2,420,384	2,472,672	2,368,542	1,778,745	1,858,774
1st week in November	99,537	106,037	103,223	81,783	70,772
Total	2,519,921	2,518,709	2,471,875	1,860,528	1,929,546
2d week in November	91,578	114,148	121,512	85,096	86,976
Total	2,611,499	2,632,856	2,593,387	1,945,624	2,016,522
3d week in November	96,100	124,031	106,989	72,929	77,491
Total	2,707,599	3,756,887	2,700,376	2,018,613	2,094,013
4th week in November	58,162	40,465	41,980	13,979	14,254
Total	2,765,761	2,797,353	2,742,356	2,032,592	2,108,267
Received in December	7,805	7,724	5,856	13,049	2,487
Total for year	$2,773,566	$2,805,077	$2,748,212	$2,045,641	$2,110,754

STATEMENT No. 49 — (*Continued.*)

PERIOD.	1859.	1860.	1861.	1862.	1863.	1864.
Received in April	$68,879	$49,763	....	....	....	....
1st week in May,	40,495	84,265	$104,606	$166,020	$189,699 00	$136,564 26
Total	110,374	134,028	....	....	....	....
2d week in May	51,226	88,220	128,954	198,498	173,320 42	154,897 25
Total	161,600	222,238	233,560	364,518	363,019 42	291,461 51
3d week in May	52,345	81,638	148,807	172,830	210,906 96	98,917 10
Total	213,945	303,886	282,367	557,348	573,926 38	390,378 61
4th week in May	59,470	105,685	140,436	186,463	161,533 35	185,315 11
Total	273,415	409,571	522,803	743,811	735,459 73	575,693 72
1st week in June	48,764	91,512	87,830	163,430	159,683 34	156,488 83
Total	322,179	501,083	610,633	907,241	895,143 07	732,182 45
2d week in June	50,581	84,203	180,240	184,098	191,438 29	163,811 00
Total	372,760	585,286	718,873	1,091,339	1,086,581 36	895,993 45
3d week in June	60,408	92,652	154,759	149,231	197,559 74	167,210 63
Total	433,168	677,938	873,632	1,245,570	1,284,141 10	1,063,204 08
4th week in June	50,574	107,898	123,376	189,538	201,435 23	174,402 32
Total	483,742	785,836	997,008	1,430,108	1,485,576 33	1,237,606 41
1st week in July	47,084	81,735	94,065	132,557	162,760 94	111,860 23
Total	530,826	867,571	1,091,073	1,562,665	1,648,337 27	1,349,466 64
2d week in July	48,163	80,258	89,981	176,646	160,910 82	118,700 09
Total	578,989	947,829	1,181,054	1,739,311	1,809,248 09	1,468,166 73
3d week in July	646,522	89,122	126,269	180,600	151,705 41	146,636 12
Total	25,511	1,034,951	1,307,323	1,919,911	1,960,953 50	1,614,802 85
4th week in July	660,738	119,521	138,841	231,298	143,749 62	155,078 08
Total	86,249	1,154,472	1,446,164	2,151,209	2,104,703 12	1,769,880 93
1st week in August	51,212	93,829	100,203	132,298	148,454 77	104,839 07
Total	737,461	1,248,301	1,546,367	2,283,507	2,253,157 89	1,874,720 00
2d week in August	47,456	93,821	86,588	107,046	115,006 26	131,008 12
Total	784,917	1,342,122	1,632,955	2,390,553	2,368,164 15	2,005,728 12

3d week in August	52,282	99,431	126,660	202,906	150,565 29	173,070 66
Total	837,199	1,441,553	1,759,615	2,593,459	2,518,729 44	2,178,798 78
4th week in August	57,964	122,359	160,038	226,008	153,799 69	170,528 36
Total	895,163	1,563,912	1,919,653	2,819,467	2,672,529 13	2,349,327 14
1st week in September	56,973	118,770	145,619	188,446	135,581 81	140,731 61
Total	952,136	1,682,682	2,065,272	3,007,913	2,808,110 94	2,490,058 75
2d week in September	52,249	103,196	147,598	191,234	140,229 53	133,535 38
Total	1,004,385	1,785,878	2,212,870	3,199,147	2,948,340 47	2,623,594 13
3d week in September	64,906	126,407	123,213	222,386	151,149 76	157,928 07
Total	1,069,291	1,912,285	2,336,083	3,421,533	3,099,490 23	2,781,522 20
4th week in September	71,162	121,144	157,643	188,146	185,841 59	151,268 03
Total	1,140,453	2,033,429	2,493,726	3,609,679	3,285,331 82	2,932,790 23
1st week in October	73,085	123,284	185,450	183,083	133,295 88	122,246 27
Total	1,213,538	2,156,713	2,679,176	3,792,762	3,418,627 70	3,055,036 50
2d week in October	64,365	125,390	164,912	212,473	155,262 12	145,974 84
Total	1,277,903	2,282,103	2,844,088	4,005,235	3,573,889 82	3,201,011 34
3d week in October	73,368	149,557	210,077	234,266	184,312 05	144,089 26
Total	1,351,271	2,431,660	3,054,165	4,239,501	3,758,201 87	3,345,100 60
4th week in October	96,057	162,161	218,197	188,313	211,406 29	138,032 95
Total	1,447,328	2,593,821	3,272,362	4,427,814	3,969,608 16	3,483,133 55
1st week in November	77,820	112,022	168,305	186,909	168,648 95	132,256 36
Total	1,525,148	2,705,843	3,440,667	4,614,723	4,138,257 11	3,615,389 91
2d week in November	76,003	133,317	207,849	239,878	234,813 27	135,183 06
Total	1,601,151	2,839,160	3,648,156	4,854,601	4,373,070 38	3,750,572 97
3d week in November	84,566	135,622	207,240	223,878	188,417 74	169,268 19
Total	1,685,717	2,974,782	3,855,396	5,078,479	4,561,488 12	3,919,841 16
4th week in November	28,843	30,599	45,820	87,178	66,520 32	51,062 97
Total	1,714,560	3,005,381	3,901,216	5,165,657	4,628,008 44	3,970,904 13
Received in December	9,385	4,216	7,569	23,286	17,198 67	13,077 70
Total	$1,723,945	$3,009,597	$3,908,785	$5,188,943	$4,645,207 11	$3,983,981 83

STATEMENT No. 49 — (*Continued*).

PERIOD.	1865.	1866.	1867.	1868.	1869.
Received in April	....	....	....	$2,200 64	....
1st week in May	$72,085 69	$67,352 29	$26,656 26	114,984 61	$1,198 47
Total	....	....	....	117,185 25	....
2d week in May	84,358 03	91,451 17	75,276 08	128,720 11	156,928 47
Total	158,443 72	158,803 46	101,932 34	245,905 36	158,126 94
3d week in May	82,416 16	119,774 34	91,476 66	159,941 24	142,707 93
Total	238,859 88	278,577 80	193,409 00	405,846 60	300,834 87
4th week in May	97,219 09	155,887 51	109,412 55	143,756 26	138,468 01
Total	336,078 97	434,465 31	302,821 55	549,602 86	439,302 88
1st week in June	86,679 95	130,346 63	107,659 36	127,828 71	116,122 81
Total	422,758 92	564,811 94	410,480 91	677,431 57	555,425 69
2d week in June	116,562 48	133,316 21	107,435 88	136,110 20	166,947 47
Total	539,321 40	698,128 15	517,916 79	813,541 77	722,373 16
3d week in June	122,386 20	193,487 73	111,179 44	157,037 84	179,407 16
Total	661,707 60	891,615 88	629,096 23	970,579 61	901,780 32
4th week in June	140,357 41	138,362 89	107,277 44	143,845 77	159,455 78
Total	802,065 01	1,029,978 77	736,373 67	1,114,425 38	1,061,236 10
1st week in July	105,906 03	119,886 22	109,642 40	107,810 61	116,303 15
Total	907,971 04	1,149,864 99	846,016 07	1,222,235 99	1,177,539 25
2d week in July	127,296 82	160,904 73	138,468 97	137,240 12	129,755 37
Total	1,035,267 86	1,310,769 72	984,485 04	1,359,476 11	1,307,294 62
3d week in July	115,952 49	161,220 33	151,089 60	141,226 82	129,568 45
Total	1,151,220 35	1,471,990 05	1,135,574 64	1,500,702 93	1,436,863 07
4th week in July	179,689 75	173,568 42	174,687 83	165,299 71	141,874 36
Total	1,330,910 10	1,645,558 47	1,310,262 47	1,666,002 64	1,578,737 43
1st week in August	137,046 09	131,614 58	137,318 02	132,550 61	112,013 61
Total	1,467,956 19	1,777,173 05	1,447,580 49	1,798,553 25	1,690,751 04
2d week in August	133,788 12	153,373 71	114,641 96	133,304 39	131,932 26
Total	1,601,744 31	1,930,546 76	1,562,222 45	1,931,857 64	1,822,683 30

3d week in August	129,663 38	157,359 06	142,172 27	161,099 13	150,309 76
Total	1,731,407 69	2,087,905 82	1,704,394 72	2,092,956 77	1,972,993 06
4th week in August	163,835 18	227,741 85	183,925 66	159,681 94	171,266 02
Total	1,895,242 87	2,315,647 67	1,888,320 38	2,252,638 71	2,144,259 08
1st week in September	135,669 33	161,110 75	144,995 97	179,720 00	137,370 36
Total	2,034,912 20	2,476,758 42	2,033,316 35	2,432,358 71	2,281,629 44
2d week in September	129,970 67	162,801 13	164,643 97	184,868 63	124,090 81
Total	2,160,882 87	2,639,559 55	2,197,960 32	2,617,227 34	2,405,720 25
3d week in September	161,486 39	153,247 61	172,727 34	184,576 52	169,935 08
Total	2,322,369 26	2,792,807 16	2,370,687 66	2,801,803 86	2,575,655 33
4th week in September	168,206 54	167,104 03	216,751 97	180,404 66	147,975 74
Total	2,490,575 80	2,959,911 19	2,587,439 63	2,982,208 52	2,723,631 07
1st week in October	191,607 64	167,952 30	170,028 95	166,875 63	129,554 69
Total	2,682,183 44	3,127,863 49	2,757,468 58	3,149,084 15	2,853,185 76
2d week in October	159,183 75	139,090 22	209,055 96	168,496 14	100,144 81
Total	2,841,367 19	3,266,953 71	2,966,524 54	3,317,580 29	2,953,330 57
3d week in October	127,940 55	216,598 88	243,428 09	175,517 26	106,750 50
Total	2,969,307 74	3,483,552 59	3,209,952 63	3,493,097 55	3,060,081 07
4th week in October	196,931 53	189,636 61	252,541 85	230,299 79	156,391 08
Total	3,166,239 27	3,673,189 30	3,462,494 48	3,723,397 34	3,216,472 15
1st week in November	177,205 16	187,819 61	145,194 24	194,278 05	141,006 40
Total	3,343,444 43	3,861,008 91	3,607,688 72	3,917,675 39	3,357,478 55
2d week in November	186,843 68	198,444 77	210,611 40	174,819 32	165,636 37
Total	3,530,288 01	4,059,453 68	3,818,300 12	4,092,494 71	3,523,114 92
3d week in November	208,726 32	230,857 46	176,699 54	94,750 33	177,608 42
Total	3,739,014 33	4,290,311 14	3,994,999 66	4,187,245 04	3,700,723 34
4th week in November	76,734 79	112,451 36	77,878 38	50,347 13	67,744 88
Total	3,815,749 12	4,402,772 50	4,072,878 04	4,237,592 17	3,768,468 22
Received in December	24,205 68	33,874 80	15,179 90	8,971 39	10,032 96
Total for year	$3,839,954 80	$4,436,637 30	$4,088,057,94	$4,246,563 56	$3,778,501 18

TABLE No. 49 — (*Continued*).

PERIOD.	1870.	1871.	1872.	1873.	1874.
Received in April	....	$89,712 11	....	....	....
1st week in May	....	40,565 59	....	....	$36,120 67
Total	....	130,277 70	....	....	....
2d week in May	$74,782 34	47,696 44	$8,350 04	....	89,001 33
Total	....	177,974 14	....	....	125,122 00
3d week in May	81,453 67	117,903 28	73,731 00	$110,354 47	116,474 71
Total	156,236 00	295,877 42	82,081 04	....	241,596 71
4th week in May	98,676 16	105,319 40	141,083 90	147,673 82	120,302 25
Total	254,012 17	401,196 82	223,164 94	258,028 29	361,898 96
1st week in June	111,827 92	81,949 51	110,449 69	109,978 69	130,689 63
Total	366,740 08	483,146 33	333,014 63	368,006 98	492,588 59
2d week in June	98,780 33	94,618 16	100,043 66	95,857 05	102,167 34
Total	465,520 41	577,764 49	433,658 29	463,864 03	594,755 93
3d week in June	123,541 78	115,140 08	140,405 83	106,942 77	137,998 85
Total	589,062 19	692,904 57	573,064 12	570,806 80	732,754 78
4th week in June	112,074 86	107,586 97	126,950 08	127,109 45	121.537 75
Total	701,137 05	800,491 54	701,014 20	697,916 25	854,292 53
1st week in July	76,219 63	85,511 09	98,434 51	94,143 60	93,796 75
Total	777,356 68	886,002 63	799,448 71	792,059 85	948,089 28
2d week in July	98,320 65	99,130 00	101,879 66	114,225 74	96,366 77
Total	875,677 33	985,132 63	901,328 37	906,285 59	1,044,456 05
3d week in July	101,570 70	115,576 49	106,643 13	119,504 83	104,477 22
Total	977,248 03	1,100,709 12	1,007,971 50	1,025,790 42	1,148,933 27
4th week in July	97,291 87	121,162 24	129,837 17	138,951 50	118,884 35
Total	1,074,539 90	1,221,871 36	1,137,808 67	1,164,741 92	1,267,817 62
1st week in August	88,171 74	101,857 94	121,353 11	94,352 28	71,354 32
Total	1,161,711 64	1,323,729 30	1,259,161 78	1,259,094 20	1,339,171 94
2d week in August	86,561 20	101,758 35	110,096 48	83,002 37	71,925 74
Total	1,248,272 84	1,425,487 65	1,369,258 26	1,342,096 57	1,411,097 68

3d week in August	110,078 36	123,002 05	122,339 45	126,725 68	82,651 38
Total	1,358,351 20	1,548,489 70	1,491,597 71	1,468,822 25	1,493,749 06
4th week in August	109,308 15	132,762 15	163,395 55	151,719 55	82,837 66
Total	1,467,659 35	1,681,251 85	1,654,993 26	1,620,541 80	1,576,586 72
1st week in September	100,339 41	127,965 81	123,156 18	100,827 52	91,977 73
Total	1,567,998 76	1,809,217 66	1,778,149 44	1,721,369 32	1,668,564 45
2d week in September	93,813 91	118,454 66	105,976 83	118,538 75	109,076 96
Total	1,661,812 67	1,927,672 32	1,884,126 27	1,839,908 07	1,777,641 41
3d week in September	103,792 78	122,840 65	142,934 44	162,725 38	122,004 03
Total	1,765,605 45	2,050,512 97	2,027,060 71	2,002,633 45	1,899,645 44
4th week in September	106,400 33	149,069 23	152,317 00	137,961 75	99,292 52
Total	1,872,005 78	2,199,582 20	2,179,377 71	2,140,595 20	1,998,937 96
1st week in October	74,228 56	112,836 68	101,094 51	126,212 05	79,832 60
Total	1,946,234 34	2,312,418 88	2,280,472 22	2,266,807 25	2,078,770 56
2d week in October	88,876 64	122,755 63	129,926 82	124,765 37	91,891 62
Total	2,035,110 98	2,435,174 51	2,410,399 04	2,391,572 62	2,170,662 18
3d week in October	114,194 61	103,755 61	133,287 48	130,891 07	109,109 93
Total	2,149,295 59	2,538,930 12	2,543,686 52	2,522,463 69	2,279,772 11
4th week in October	127,344 00	126,358 38	127,116 03	147,346 42	111,626 68
Total	2,276,639 59	2,665,288 50	2,670,802 55	2,669,810 11	2,391,398 79
1st week in November	87,068 76	131,668 41	127,736 00	126,956 57	91,083 15
Total	2,363,708 35	2,796,956 91	2,798,538 55	2,796,766 68	2,482,481 94
2d week in November	99,461 10	130,088 81	139,544 03	127,754 22	94,287 33
Total	2,463,169 45	1,927,045 72	2,938,082 58	2,924,520 90	2,576,769 27
3d week in November	98,876 81	126,603 05	97,130 01	47,851 30	47,365 08
Total	2,562,046 26	3,053,648 77	3,035,212 59	2,972,372 20	2,624,134 35
4th week in November	39,392 52	45,256 97	33,261 42	2,047 91	10,833 82
Total	2,601,438 78	3,098,905 74	3,068,474 01	2,974,420 11	2,634,968 17
Received in December	10,138 90	1,933 08	3,937 71	2,298 43	2,102 75
Total for the year	$2,611,577 68	$3,100,838 82	$3,072,411 72	$2,976,718 54	$2,637,070 92

STATEMENT No. 49 — (*Continued*).

PERIOD.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.
Received in April	....	....	....	$56,672 36	....	$46,271 82	....	$39,068 72
1st week in May	....	$15,318 03	....	29,278 11	....	22,659 11	....	18,815 10
Total	....	....	....	85,950 47	....	68,930 93	....	57,883 82
2d week in May	....	35,704 99	$31,194 03	30,782 31	$32,540 49	36,900 73	$1,660 44	15,322 08
Total	....	49,023 02	....	116,733 78	....	105,831 66	1,660 44	73,205 90
3d week in May	$44,376 39	75,611 43	25,910 21	41,878 27	28,265 43	38,924 19	12,901 02	24,406 42
Total	....	124,634 45	57,104 24	158,612 05	60,805 92	144,755 85	14,561 46	97,612 32
4th week in May	56,266 51	55,820 04	29,719 51	41,359 09	31,271 95	44,259 41	43,765 88	25,944 67
Total	100,642 90	180,454 49	86,823 75	199,971 14	92,077 87	189,015 26	58,327 34	123,556 99
1st week in June	56,777 86	46,752 17	20,864 79	29,592 76	26,293 95	42,771 31	28,972 63	20,180 41
Total	157,420 76	228,206 66	107,688 54	229,563 90	118,371 82	231,786 57	87,299 97	143,737 40
2d week in June	46,570 25	46,566 12	24,739 05	24,439 63	18,432 16	43,151 51	23,634 13	16,259 90
Total	203,991 01	274,762 73	132,427 59	254,003 53	136,803 98	274,938 08	110,934 10	159,997 30
3d week in June	73,123 62	48,945 78	29,254 09	31,284 16	26,585 36	50,863 17	32,160 76	19,422 03
Total	277,114 63	323,708 56	161,681 68	285,287 69	163,389 34	325,801 25	143,094 86	179,419 33
4th week in June	74,882 46	64,021 94	27,085 56	26,965 10	26,638 01	42,903 64	24,444 99	22,530 65
Total	351,997 09	387,730 50	188,767 24	312,252 79	190,027 35	368,704 89	167,539 85	201,949 98
1st week in July	57,036 47	41,722 21	27,617 75	18,654 36	18,448 42	38,739 51	24,350 99	15,169 05
Total	409,033 56	429,452 71	216,384 99	330,907 15	208,475 77	407,444 40	191,890 84	217,119 03
2d week in July	62,897 03	49,916 82	22,987 17	20,955 98	35,619 92	41,263 30	22,877 21	17,010 05
Total	471,930 59	479,369 53	239,372 16	351,863 13	244,095 69	448,707 70	214,768 05	234,129 08
3d week in July	63,482 03	36,009 72	29,817 40	28,314 85	29,415 17	40,178 77	26,772 07	15,383 16
Total	535,412 62	515,379 20	269,189 56	380,177 98	273,510 86	488,886 47	241,540 12	249,512 24
4th week in July	64,733 38	47,379 25	36,758 40	29,344 96	37,562 91	45,807 09	24,845 98	24,544 31
Total	600,146 00	562,758 45	305,947 96	409,522 94	311,073 77	534,693 56	266,386 10	274,056 55
1st week in August	54,482 11	32,641 38	29,191 38	21,088 98	32,366 21	38,770 36	13,998 33	26,436 53
Total	654,628 11	595,399 83	335,141 34	430,611 92	343,439 98	573,463 92	280,384 43	300,493 08
2d week in August	49,615 49	37,360 23	30,207 03	28,468 80	38,606 28	36,830 96	23,517 89	26,052 89
Total	704,243 60	632,760 06	365,408 37	459,080 72	382,046 26	610,294 38	303,902 32	326,545 97
3d week in August	77,953 49	50,909 29	36,148 27	40,313 38	39,867 85	39,589 74	27,383 90	28,725 97
Total	782,197 09	683,669 35	401,556 64	499,394 10	421,914 11	649,884 62	331,286 22	355,271 94
4th week in August	64,870 64	56,014 94	42,347 41	48,246 10	42,185 71	57,627 19	33,805 57	27,612 58
Total	847,067 73	739,684 29	443,904 05	547,640 20	464,099 82	707,511 81	365,091 79	382,884 52
1st week in September	54,042 45	50,370 90	35,154 02	34,137 99	37,417 38	37,915 68	18,597 62	27,772 64
Total	901,110 18	790,055 19	479,058 07	581,778 19	501,517 20	745,427 49	383,689 41	410,657 16
2d week in September	67,462 70	36,817 55	36,003 59	32,183 26	44,580 23	35,654 16	25,381 19	25,871 31
Total	968,572 88	826,872 74	515,061 66	613,961 45	546,097 43	781,081 65	409,070 60	436,528 47
3d week in September	57,187 13	50,970 52	39,229 41	44,048 78	49,432 51	46,766 75	33,800 67	17,154 76
Total	1,825,760 01	877,843 26	554,291 07	658,010 15	595,529 94	827,848 40	442,871 27	453,683 23
4th week in September	77,155 77	61,538 76	35,630 27	54,453 06	49,329 62	40,005 11	23,262 19	22,440 46
Total	1,102,915 78	939,382 02	589,921 34	712,463 21	644,859 56	867,853 51	466,133 46	476,123 69

1st week in October..	54,901 26	55,721 26	25,860 28	36,200 57	39,135 47	35,269 94	18,068 25	33,736 40
Total	1,157,817 04	995,103 28	625,781 62	748,663 78	683.995 03	903,123 45	484.201 71	509,860 09
2d week in October..	67.461 59	59,073 36	38,940 98	42,547 95	38,988 52	49,606 77	19.765 70	24,925 15
Total	1,225,278 63	1,054,176 64	664,722 60	791,211 73	722,983 55	952,730 22	503,967 41	534,785 24
3d week in October.	69,424 80	48,685 01	46,029 41	51,278 74	48,825 44	41,524 70	26,870 88	20,583 76
Total	1,294,703 43	1,102,861 65	710,752 01	842,490 47	771.808 99	994,254 92	530,838 29	555,369 00
4th week in October	75,854 21	63,857 11	48,022 77	39,281 77	49,057 02	33,685 77	30,539 54	31,417 54
Total	1,370,557 65	1,166,718 76	758,774 48	881,772 24	820,866 01	1,027,940 69	561,377 83	586,786 54
1st week in November	72,588 93	56,939 56	34,567 52	36,470 65	36,740 00	32,106 33	32,471 45	24,143 09
Total	1,443,146 58	1,223,658 32	793,342 30	918,242 89	857,607 00	1,060,047 02	593,849 28	610,929 63
2d week in November...........	80,040 37	68,614 32	52,924 31	46,663 90	43.164 68	47,533 32	21,269 23	25,790 94
Total	1,523,186 95	1,292,272 64	846,263 61	964,906 79	900,771 68	1,107,580 34	615,118 51	636,720 57
3d week in November.......	57,304 45	34,282 30	24,971 41	21,919 24	34,723 38	47,341 12	13,366 89	16.018 58
Total	1,580,491 40	1,326,554 94	871,238 02	986,826 03	935,495 06	1,154,921 46	628.485 40	652,739 15
4th week in November........ .	8,417 50	11,842 76	7,373 31	5,039 37	4,595 45	256 05	3,135 71	2,456 36
Total....	1,588,908 90	1,338,397 70	878,611 33	991,865 40	940,090 51	1,155,177 51	631,621 11	655,195 51
Received in December..	1,123 35	1,605 60	2,285 09	1,482 98	1,483 46	241 33	768 86	630 49
Total for the year	$1,590,032 25	$1,340,003 30	$880,896 42	$993,348 38	$941,573 97	$1,155,418 84	$632,389 97	$655,826 00

(No. 50.)

RATES OF TOLL — 1882.

Established by the Canal Board on persons and property transported on the *Erie, Champlain, Oswego, and the Cayuga and Seneca canals,* to take effect on the opening of navigation.

Toll is to be computed upon the weight ("1,000 *pounds per mile*") *of all articles contained in the following list, unless otherwise stated opposite to the articles excepted.*

	Toward tide. cts. m. fr.	From tide. cts. m. fr.
Boats	Free.	Free.
Yachts and pleasure boats, per mile	5 0 0	5 0 0

THE FOREST.

	Toward tide. cts. m. fr.	From tide. cts. m. fr.
Fur and peltry	Free.	Free.

PRODUCT OF WOOD.

	Toward tide. cts. m. fr.	From tide. cts. m. fr.
Ashes, pot and pearl	0 0 5	Free.
Ashes, leached	Free.	Free.
Lath per M per mile	0 0 1	Free.
Lath per 1,000 lbs. per mile	0 0 7½	Free.
Staves, heading, etc	Free.	Free.
Shingles, per M per mile	0 0 1¼	Free.
Shingles, per 1,000 lbs	0 0 5	Free.

WOOD FOR FUEL.

	Toward tide. cts. m. fr.	From tide. cts. m. fr.
Slab wood, per cord	0 1 0	Free.
Cord wood, per cord	0 2 0	Free.
Lumber No. 1.*—*By weight, per* 1,000 *pounds per mile:*		
White pine, white-wood, bass-wood, cedar, boards, planks, scantling, and all sidings, and other sawed stuff less than one inch thick (except such as is enumerated in Lumber No. 3)	0 0 7½	Free.
Oak, hickory, beech, sycamore, black walnut, butternut, maple, ash, elm, fir, tamarack, yew and cherry,	0 0 5	Free.
Hemlock and spruce	0 0 3½	Free.
Lumber No. 2.*—*By measurement, per* 1,000 *feet per mile:*		
Boards, planks, scantling, railroad ties, pickets for fences, and sawed timber, siding, and other sawed stuff, less than one inch thick, reduced to inch measure (except such as is enumerated in Lumber No. 3); and all kinds of red cedar, cedar posts, estimated that a cord, after deducting for openings, will contain 1,000 feet	0 1 5	Free.
Hemlock and spruce per 1,000 feet per mile	0 1 0	Free.
Lumber No. 3.*—*By weight, per* 1,000 *pounds per mile:*		
Hoop poles, hand spikes, rowing oars, broom handles, spokes, hubs, treenails, fellies, boat and ship knees, plane stocks, pickets for fences, railroad ties, last blocks, stuff (manufactured or partly manufactured) for boxes, chairs and bedsteads, hop poles, brush handles, brush backs, looking-glass backs, gun stocks, plow beams and plow handles	0 0 7½	Free.
Sawed stuff for window blinds, not exceeding one-fourth of an inch in thickness	0 2 0	Free.

☞ * Lumber shall not be cleared by measurement when carried in a boat having other articles on board paying toll by *weight*, but such lumber shall in all cases be also cleared by weight.

When a cargo is composed entirely of lumber, which can be cleared by weight or measure, the whole of such cargo shall be cleared by measurement or by weight, as the shipper or master may elect, and in no case shall a portion of any such cargo be cleared by measurement and the other portion by weight.

	cts. m. fr.	cts. m. fr.
Timber.*—Squared and round, transported in rafts, per 100 cubic feet	0 5 0	Free.

AGRICULTURE.

PRODUCT OF ANIMALS.

Pork	Free.	Free.
Beef	Free.	Free.
Bacon	Free.	Free.
Cheese	Free.	Free.
Butter	Free.	Free.
Lard, tallow and lard oil	Free.	Free.
Wool	Free.	Free.
Hides	0 0 5	Free.

VEGETABLE FOOD.

Flour	Free.	Free.
Wheat	0 0 5	Free.
Rye	0 0 5	Free.
Corn	0 0 5	Free.
Corn meal	Free.	Free.
Barley	0 0 5	Free.
Barley malt	0 0 5	Free.
Oats	0 0 5	Free
Bran and ship stuffs	0 0 5	Free.
Peas and beans	0 0 5	Free.
Apples	0 0 5	Free.
Potatoes	0 0 5	Free.
Dried fruit	Free.	Free.

ALL OTHER AGRICULTURAL PRODUCTS.

Cotton	Free.	Free.
Unmanufactured tobacco	Free.	Free.
Hemp	Free.	Free.
Clover and grass seed	Free.	Free
Flax seed	Free.	Free.
Hops	Free.	Free.

MANUFACTURES.

Domestic spirits	Free.	Free.
Oil meal and cake	Free.	Free.
Leather	Free.	Free.
Furniture	0 0 5	Free.
Bar and pig lead	Free.	Free.
Pig iron	0 0 5	Free.
Bloom and bar iron	0 0 5	Free.
Castings and iron ware	0 0 5	Free.
Domestic woolens	Free.	Free.
Domestic cottons	Free.	Free.
Domestic salt	Free.	Free.
Foreign salt	0 1 2½	Free.

MERCHANDISE.

Sugar	0 0 5	Free.
Molasses	0 0 5	Free.
Coffee	Free.	Free.
Nails, spikes and horse shoes	0 0 5	Free.
Iron and steel	0 0 5	Free.
Railroad iron	0 0 5	Free.
Flint, enamel, crockery, glassware	0 0 5	Free.
All other merchandise	0 0 5	Free.

OTHER ARTICLES.

Live cattle, hogs and sheep	Free.	Free.
Stone, lime and clay	0 0 5	Free.
Gypsum	0 0 5	Free.
Rock phosphates and superphosphates	Free.	Free.
Anthracite coal	0 0 1¼	Free.
Bituminous coal	0 0 1¼	Free.
Copper ore	0 0 5	Free.

☞ * In the measurement of timber, bark adhering to the wood and refuse stuff are to be estimated as forming part of the timber, and to be rated accordingly.

	cts. m. fr.	cts. m. fr.
Iron ore	0 0 2½	Free.
Petroleum or earth oil, crude and refined	0 0 2½	Free.
Articles not specified	0 0 5	Free.

Established by the Canal Board, on persons and property transported on the *Black River Canal*, to take effect on the opening of navigation.

Toll is to be computed upon the weight ("1,000 pounds per mile") of all articles contained in the following list, unless otherwise stated opposite to the articles excepted.

	cts. m. fr.
Boats	Free.
Yachts and pleasure boats, per mile	5 0 0

THE FOREST.

Fur and peltry	Free.

PRODUCT OF WOOD.

Ashes, pot and pearl	0 0 5
Ashes, leached	Free.
Lath per M per mile	0 0 1
Lath per 1,000 lbs. per mile	0 3 0
Staves, heading, etc	0 3 0
Shingles, per M per mile	0 0 1¼
Shingles, per 1,000 lbs.	0 0 5

WOOD FOR FUEL.

Slab wood, per cord	0 1 0
Cord wood, per cord	0 2 0

LUMBER NO. 1.* — *By weight, per 1,000 pounds per mile:*

White pine, white-wood, bass-wood, cedar, boards, planks, scantling, and all sidings, and other sawed stuff less than one inch thick (except such as is enumerated in Lumber No. 3)	0 3 0
Oak, hickory, beech, sycamore, black walnut, butternut, maple, ash, elm, fir, tamarack, yew and cherry	0 3 0
Hemlock and spruce	0 3 0

LUMBER NO. 2.* — *By measurement, per 1,000 feet per mile:*

Boards, planks, scantling, railroad ties, pickets for fences, and sawed timber, siding, and other sawed stuff, less than one inch thick, reduced to inch measure (except such as is enumerated in Lumber No. 3); and all kinds of red cedar, cedar posts, estimated that a cord, after deducting for openings, will contain 1,000 feet	0 4 0
Hemlock and spruce, per 1,000 feet, per mile	0 4 0

LUMBER NO. 3.* — *By weight, per 1,000 pounds per mile:*

Hoop poles, hand spikes, rowing oars, broom handles, spokes, hubs, treenails, fellies, boat and ship knees, plane stocks, pickets for fences, railroad ties, last blocks, stuff (manufactured or partly manufactured) for boxes, chairs and bedsteads, hop poles, brush handles, brush backs, looking-glass backs, gun stocks, plow beams and plow handles	0 3 0
Sawed stuff for window blinds, not exceeding one-fourth of an inch in thickness	0 7 0

☞* Lumber shall not be cleared by measurement when carried in a boat having other articles on board paying toll by *weight*, but such lumber shall in all cases be also cleared by weight.

When a cargo is composed entirely of lumber, which can be cleared by weight or measure, the whole of such cargo shall be cleared by measurement or by weight, as the shipper or master may elect, and in no case shall a portion of any such cargo be cleared by measurement and the other portion by weight.

Tan bark, per cord, per mile	0 5 0
Timber*—Squared and round, transported in rafts, per 100 cubic feet.	1 5 0

☞* In the measurement of timber, bark adhering to the wood and refuse stuff are to be estimated as forming part of the timber, and to be rated accordingly.

AGRICULTURE.

PRODUCT OF ANIMALS.

Pork	Free.	Butter	Free.
Beef	Free.	Lard, tallow and lard oil	Free.
Bacon	Free.	Wool	Free.
Cheese	Free	Hides	0 1 0

VEGETABLE FOOD.

	c. m. f.		c. m, f.
Flour	Free.	Oats	0 0 5
Wheat	0 0 5	Bran and ship stuffs	0 0 5
Rye	0 0 5	Peas and beans	0 0 5
Corn	0 1 0	Apples	0 0 5
Corn meal	0 1 0	Potatoes	0 3 0
Barley	0 0 5	Dried fruit	Free.
Barley malt	0 0 5		

ALL OTHER AGRICULTURAL PRODUCTS.

Cotton	Free.	Clover and grass seed	Free.
Unmanufactured tobacco	Free.	Flax seed	Free.
Hemp	Free.	Hops	Free.

MANUFACTURES.

Domestic spirits	Free.	Bloom and bar iron	0 0 5
Oil meal and cake	Free	Castings and iron ware	0 0 5
Leather	0 1 0	Domestic woolens	Free.
Furniture	0 0 5	Domestic cottons	Free.
Bar and pig lead	Free.	Domestic salt	0 0 5
Pig iron	0 0 5	Foreign salt	0 2 5

MERCHANDISE.

Sugar	0 0 5	Iron and steel	0 0 5
Molasses	0 0 5	Railroad iron	0 0 5
Coffee	Free.	Flint enamel crockery, glassware	0 0 5
Nails, spikes and horse shoes	0 0 5	All other merchandise	0 0 5

OTHER ARTICLES.

Live cattle, hogs and sheep	Free.	Copper ore	0 0 5
Stone, lime and clay	0 0 5	Iron ore	0 0 2½
Gypsum	0 0 5	Petroleum or earth oil, crude and refined	0 0 2½
Anthracite coal	0 0 1¼		
Bituminous coal	0 0 1¼	Articles not specified	0 0 5

(No. 51.)

STATEMENT of the number, class and tonnage of boats built and registered in 1882.

TONNAGE.	Steam.	D. bow.	Scows.	Decked screws.	Lake.	Bull-heads.	Line.	Total boats.	Total tons.
300	....	....	....	....	....	....	....	....	
280	....	....	....	....	....	....	....	....	
250	....	....	4	....	7	1	....	12	3,000
240	1	....	3	....	5	....	....	9	2,160
230	....	....	....	....	....	....	....	....	
225	1	....	....	....	....	....	....	1	225
220	....	....	....	....	2	....	....	2	440
200	1	....	3	....	1	....	....	5	1,000
190	....	....	....	....	1	....	....	1	190
180	....	....	....	....	....	....	....	....	
170	....	....	....	....	....	....	....	....	
160	....	....	....	....	....	....	....	....	
150	....	....	1	....	....	1	....	2	300
140	1	....	....	....	....	....	....	1	140
130	....	....	....	....	1	....	....	1	130
125	....	....	....	....	1	1	....	2	250
120	....	....	1	....	....	....	....	1	120
115	....	....	....	....	1	2	....	3	345
110	....	....	....	....	....	1	....	1	110
100	....	....	3	....	2	30	....	35	3,500
95	....	....	3	....	1	....	....	4	380
90	....	....	3	....	7	....	....	10	900
85	....	....	....	....	....	....	....	....	
80	....	....	....	....	....	....	....	....	
75	....	....	....	....	....	....	....	....	
70	....	....	....	....	....	....	....	....	
60	1	....	....	....	....	....	....	1	60
50	....	....	....	....	....	....	....	....	
45	....	....	....	....	....	....	....	....	
30	....	....	....	....	....	....	....	....	
25	....	....	....	....	....	....	....	....	
20	1	....	....	....	....	....	....	1	20
5	1	....		....	....	....	....	1	5
	7		21		29	36	...	93	13,275

(No. 52.)

STATEMENT showing the various tonnage of the boats registered in each of the last thirty-nine years, and the progressive increase of their capacity.

TONNAGE.	Inventory of all boats to January, 1844.	NEW BOATS REGISTERED.									
		1844.	1845.	18	18	1848.	1849.	1850.	1851.	1852.	1853.
280	....	....	....	....	....	....	....	....	....	....	....
250	....	....	....	....	....	....	....	....	....	....	3
240	....	....	....	....	....	....	....	....	....	....	1
230	....	....	....	....	....	....	....	....	....	....	....
225	....	....	....	....	....	....	....	....	....	....	....
220	....	....	....	....	....	....	....	....	....	....	1
200	....	....	....	....	....	....	....	....	....	....	5
190	....	....	....	....	....	....	....	....	....	....	....
180	....	....	....	....	....	....	....	....	....	....	....
170	....	....	....	....	....	....	....	....	1	....	....
160	....	....	....	....	....	....	....	....	....	....	....
150	....	....	....	....	....	....	....	2	....	1	6
140	....	....	....	....	....	....	....	....	....	....	....
135	....	....	....	....	....	....	....	....	....	....	....
130	....	....	....	....	....	....	1	....	1	2	7
125	....	....	....	....	....	....	....	....	1	....	18
120	....	....	....	....	....	....	1	....	2	....	15
115	....	....	....	....	....	....	....	....	....	....	10
110	....	....	....	....	....	....	....	....	....	....	16
105	....	....	....	....	....	....	....	....	....	....	....

100	....	....	....	....	......	....	2	13	27	34	79
95	....	....	1	1	6	....	4	6	23	63	180
90	2	1	4	6	27	10	4	25	72	90	164
85	1	....	1	1	45	21	13	16	11	22	22
80	3	9	13	100	560	143	78	38	28	26	33
75	14	33	60	186	553	158	75	17	22	10	15
70	175	124	107	123	162	59	20	20	18	9	6
65	295	94	54	26	44	13	2	4	1	4	3
60	526	71	33	9	30	25	7	5	2	2	2
55	256	15	4	1	13	8	....	....	....	....	.....
50	457	14	5	3	4	2	2	4	1	6	3
45	158	1	2	1	3	4	....	....	1	....	.....
40	148	....	....	3	4	1	....	3	1	....	.....
35	33	1	1	....	3	....	....	....	1	....	.....
30	34	11	1	2	3	6	4	....	....	....	.....
25	10	3	....	4	3	....	....	....	....	....	.....
20	8	....	3	3	2	....	2	....	....	....	.....
15	3	1	....	....	1	1	....	....	....	....	.....
10	4	....	1	2	3	1	....	....	....	2	.....
5	....	....	4	....	....	....	....	1	....	....	.....
2	....	....	3	....	....	....	....	....	....	....	.....
	2,126	378	297	477	1,466	457	215	152	213	271	590

STATEMENT No. 52 — (*Continued*).

TONNAGE.	NEW BOATS REGISTERED.									
	1854.	1855.	1856.	1857.	1858.	1859.	1860.	1861.	1862.	1863.
280	....	....	....	....	....	....	....	....	2	....
250	1	....	1	1	1	2	2	16	3	....
240	....	1	2	....	....	....	....	7	1	....
230	....	....	....	....	....	....	....	....	28	3
225	....	....	....	....	....	....	....	....	113	2
220	1	....	....	....	....	....	3	55	4	69
200	3	4	....	3	3	4	33	176	310	254
190	....	....	....	....	....	....	....	....	19	25
180	....	....	4	....	7	12	60	51	6	70
170	1	....	....	....	15	7	17	9	16	8
160	....	....	....	....	....	....	....	....	2	9
150	13	2	2	51	46	11	14	27	84	24
140	....	....	4	15	5	1	2	19	12	14
135	....	....	5	2	....	....	2	1	....	....
130	9	43	22	16	4	2	2	3	8	16
125	105	18	14	21	15	1	5	6	2	3
120	143	125	118	84	13	9	22	15	19	15
115	34	17	13	4	....	....	5	1	13	3
110	87	12	10	6	3	1	4	6	4	5
105	....	....	1	2	....	2	....	....	...	....
100	83	28	28	8	25	14	55	69	100	61
95	69	40	38	18	15	5	13	20	24	14
90	95	58	69	43	16	36	42	42	54	102

85	20	16	3	16	5	8	35	30	3	8
80	44	28	6	15	22	25	49	37	4	18
75	32	43	17	14	14	21	19	....	4	7
70	10	23	4	3	7	16	4	7	1	10
65	1	2	....	1	3	4	3	2	....	....
60	2	4	....	3	18	8	2	6	1	6
55	....	....	....	....	....	10	....	....	....	....
50	1	3	1	....	7	1	2	2	2	5
45	1	....	....	....	1	3	1	....	1	6
40	1	....	1	1	3	....	1	1	....	....
35	....	....	....	....	....	....	1	....	....	....
30	....	....	....	1	....	....	....	....	2	9
25	1	1	....	....	3	....	....	1	4	....
20	....	1	1	....	....	....	1	1	1	4
15	2	1	1	....	1	1	....	....	....	....
	760	471	363	328	253	204	400	619	848	770

STATEMENT No. 52—(*Continued*).

TONNAGE.	NEW BOATS REGISTERED.										
	1864.	1865.	1866.	1867.	1868.	1869.	1870.	1871.	1872.	1873.	1874.
280	....	....	....	....	....	....	....	....	....	....	.....
250	....	4	8	2	3	3	7	4	14	1	6
240	1	3	40	47	49	60	49	44	92	176	111
230	3	4	28	42	61	38	37	18	21	20	16
225	11	4	24	29	44	18	10	7	10	26	2
220	30	19	43	47	27	14	11	4	19	21	4
200	98	45	68	56	32	11	13	6	45	20	20
190	3	....	....	5	....	....	....	....	....	....	.....
180	7	4	4	....	....	....	2	....	1	1	.....
170	....	3	....	....	....	1	....	....	1	2	.....
160	2	....	4	....	2	....	1	2	....	....	8
150	24	8	11	12	7	2	....	....	6	4	.....
140	15	3	5	7	7	2	2	....	10	16	7
135	....	....	....	....	....	....	....	....	....	15	.....
130	3	2	7	20	5	7	19	13	3	5	1
125	5	2	4	4	2	....	2	1	1	10	5
120	6	6	21	16	6	7	7	2	10	2	2
115	4	4	12	....	....	....	2	1	1	35	3
110	2	6	2	....	2	3	2	1	7	33	15
105	....	....	....	....	....	....	....	....	....	8	.....
100	38	11	95	114	40	43	30	28	23	14	13
95	38	5	21	....	7	3	4	3	3	5	6
90	66	37	65	83	27	19	13	13	14	3	8

85	4	2	2	....	3	2	5	1	4	1	3
80	19	8	6	22	7	4	5	2	6	6	3
75	1	6	4	7	4	5	4	5	5	6	3
70	7	6	4	4	23	23	9	22	12	1	6
65	....	....	....	....	....	....	....	....	....	....	.....
60	6	3	4	2	23	25	31	13	14	....	5
55	....	....	....	....	....	....	....	....	....	....	.....
50	1	1	1	1	6	6	2	....	1	....	3
45	3	....	....	....	....	....	....	....	....	1	2
40	....	....	....	....	....	....	....	....	....	....	.....
35	....	....	....	....	....	....	....	....	....	....	.....
30	....	1	...	....	....	....	....	1	1	1	.....
25	1	....	....	....	....	....	....	....	....	....	.....
20	1	1	1	....	....	....	1	....	1	....	2
15	....	....	....	....	....	2	1	3	1	....	.....
	399	198	484	520	387	298	269	194	326	433	249

STATEMENT No. 52 — (*Continued*).

TONNAGE.	New Boats Registered.							
	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.
280	....	....	....	....	....	1	....	....
250	5	2	....	15	19	63	70	12
240	35	18	14	116	151	223	109	9
230	4	3	....	5	13	23	24	....
225	1	1	1	2	1	10	9	1
220	3	....	1	3	1	15	5	2
200	8	2	1	8	8	17	13	5
190	....	....	....	....	....	....	1	1
180	....	....	....	2	2	....	1	....
170	....	....	....	....	1	....	....	....
160	....	3	1	....	1	....	....	....
150	....	....	1	....	2	6	10	2
140	1	....	....	3	....	1	3	1
135	....	....	....	....	....	....	1	....
130	1	....	....	2	4	4	....	1
125	4	1	1	....	6	19	1	2
120	2	1	1	4	4	8	10	1
115	....	1	1	....	3	2	4	3
110	6	10	6	14	15	....	16	1
105	....	....	....	....	....	....	2	....
100	5	11	31	30	51	31	31	35
95	9	9	1	7	16	4	29	4
90	10	7	6	28	27	5	8	10

85.	3			1	1	3		
80.		1		4	1	1	4	
75.				5	7		7	
70.		1		14	10			
65.								
60.	1	1		22	19	1	5	1
55.								
50.	2			10	7			
45.								
40.							1	
35.								
30.		3			1	1	1	
25.	1			3	2		1	
20.			1					1
15.	1	1			1	1	1	
10.			1	1	4			
5.			1	1	4		1	1
2.								
	102	75	69	300	382	439	368	93

(No. 53.)

STATEMENT showing the quantity and tons of, and the tolls paid on, each article transported on all the canals, from 1861 *to* 1882, *both years inclusive.*

ARTICLES.	1861.			1862.		
	Quantity.	Tons.	Tolls.	Quantity.	Tons.	Tolls.
THE FOREST.						
Fur and peltry, lbs	310,000	155	$81	218,000	109	$79
Product of wood.						
Boards and scantling, feet	355,365,000	592,274	247,801	503,593,800	839,323	436,092
Shingles, M	101,448	12,681	8,353	131,064	16,383	10,744
Timber, cubic feet	4,575,550	91,511	36,800	6,673,200	133,464	79,808
Staves, lbs	306,176,000	153,088	94,133	379,536,000	189,768	120,848
Wood, cords	71,730	200,844	10,415	138,417	387,569	20,895
Ashes, pot and pearl, bbls	6,684	1,838	1,064	11,120	3,058	967
Total of the forest	....	1,052,392	$398,647	....	1,569,674	$699,433
AGRICULTURE. *Product of animals.*						
Pork, bbls	15,500	2,480	$1,824	193,606	30,977	$34,391
Beef, bbls	25,968	4,155	4,693	83,031	13,285	15,611
Bacon, lbs	562,000	281	160	5,904,000	2,952	1,804
Cheese, lbs	11,676,000	5,838	2,823	11,028,000	5,514	2,523
Butter, lbs	5,210,000	2,605	1,483	7,968,000	3,984	1,973
Lard, tallow, and lard oil, lbs	1,352,000	676	539	10,024,000	5,012	4,483

Wool, lbs	2,262,000	1,131	1,125	3,020,000	1,510	1,315
Hides, lbs	4,232,000	2,116	1,485	10,070,000	5,035	3,366
Total product of animals	....	19,282	$14,132	....	68,269	$65,166
Vegetable food.						
Flour, bbls	1,677,416	180,081	$198,457	2,102,574	227,078	$395,578
Wheat, bush	32,171,900	995,157	1,368,423	37,579,967	1,127,399	1,882,767
Rye, bush	976,000	27,328	28,596	967,750	27,097	40,231
Corn, bush	25,024,643	700,690	1,062,593	27,225,643	761,318	1,176,702
Corn meal, bbls	2,176	225	105	18,416	1,989	2,170
Barley, bush	2,446,083	58,658	62,861	2,764,916	66,358	61,071
Barley malt, bush	....	....	....	280,182	4,623	5,689
Oats, bush	6,105,313	97,685	99,605	6,550,187	104,803	111,804
Bran and ship stuffs, lbs	45,298,000	22,649	17,104	35,494,000	17,747	11,759
Peas and beans, bush	347,233	10,417	9,965	375,433	11,263	11,619
Apples, bbls	....	....	....	439,346	32,951	25,843
Potatoes, bush	947,733	28,432	7,244	1,285,867	38,576	11,189
Dried fruit, lbs	1,810,000	905	1,893	792,000	396	696
Total vegetable food	....	2,122,237	$6,856,846	....	2,422,598	$3,637,118
All other agricultural products.						
Cotton, lbs	1,278,000	639	$111	508,000	254	$49
Unmanufactured tobacco, lbs	3,100,000	1,550	649	2,552,000	1,276	504
Hemp, lbs	274,000	137	35	176,000	88	10
Clover and grass seed, lbs	215,000	107	145	628,000	314	622
Flax seed, lbs	234,000	117	117	1,692,000	846	847

STATEMENT No. 53 — (*Continued.*)

ARTICLES.	1861.			1862.		
	Quantity.	Tons.	Tolls.	Quantity.	Tons.	Tolls.
Hops, lbs	608,000	304	$163	782,000	391	$176
Total all other agricultural products	....	2,854	$1,220	....	3,169	$2,208
Total agriculture	....	2,144,373	$2,872,198	....	2,494,036	$3,704,792
MANUFACTURES.						
Domestic spirits, gals	2,461,000	9,844	$11,311	2,261,750	9,047	$11,199
Oil meal and cake, lbs	11,606,000	5,803	7,236	9,186,000	4,593	5,679
Leather, lbs	6,588,000	3,294	1,353	7,742,000	3,871	1,583
Furniture, lbs	5,754,000	2,877	3,623	6,204,000	3,102	3,188
Bar and pig lead, lbs	10,738,000	5,369	1,576	7,216,000	3,608	2,509
Pig iron, lbs	57,274,000	28,637	12,711	98,332,000	49,166	22,830
Bloom and bar iron, lbs	8,580,000	4,290	1,353	15,462,000	7,731	1,835
Castings and ironware, lbs	16,606,000	8,303	12,144	22,454,000	11,227	15,928
Domestic woolens, lbs	104,000	52	33	218,000	109	66
Domestic cottons, lbs	368,000	184	52	418,000	209	82
Domestic salt, lbs	416,322,000	208,116	40,769	469,850,000	234,925	49,129
Foreign salt, lbs	6,974,000	3,487	3,163	74,578,000	37,289	47,528
Total manufactures	....	280,256	$95,722	....	3,648,877	$161,556
MERCHANDISE.						
Sugar, lbs	46,040,000	23,020	$11,311	58,828,000	29,414	$10,175

Molasses, lbs	21,468,000	10,734	4,092	21,410,000	10,705	3,803
Coffee, lbs	4,892,000	2,446	1,479	4,558,000	1,179	1,023
Nails, spikes and horse-shoes, lbs	14,510,000	7,255	1,851	15,258,000	7,629	1,817
Iron and steel, lbs	12,870,000	6,435	1,855	20,844,000	10,442	2,380
Railroad iron, lbs	15,776,000	7,888	4,797	15,550,000	7,775	7,883
Flint enamel, crockery and glassware, lbs	7,414,000	3,707	1,858	10,306,000	5,153	8,614
All other merchandise, lbs	147,222,000	73,611	80,715	190,100,000	95,050	81,749
Total merchandise	....	135,096	$107,958	....	167,927	$117,444
OTHER ARTICLES.						
Live cattle, hogs and sheep, lbs	260,000	130	$28	96,000	48	$50
Stone, lime and clay, lbs	233,356,000	116,678	17,882	230,588,000	115,294	22,093
Gypsum, lbs	85,122,000	42,561	5,909	75,798,000	37,899	5,661
Mineral coal, lbs	1,084,300,000	542,150	112,155	....	....	....
Anthracite coal, lbs	....	....	....	874,652,000	437,326	88,807
Bituminous coal, lbs	....	....	....	398,788,000	199,394	39,811
Copper ore, lbs	6,826,000	3,413	1,204	6,326,000	3,163	2,278
Iron ore, lbs	....	....	....	276,234,000	138,117	29,241
Sundries, lbs	381,172,000	190,586	89,129	142,060,000	71,030	56,494
Total other articles	....	895,518	$226,336	....	1,002,271	$244,435
Total	....	4,507,635	$3,700,861	....	5,598,785	$4,927,660
Adds tolls on boats and passengers	....	....	207,924	....	....	261,283
Total tolls	....	....	$3,908,785	....	....	$5,188,943

STATEMENT No. 53—(*Continued.*)

ARTICLES.	1863.			1864.		
	Quantity.	Tons.	Tolls.	Quantity.	Tons.	Tolls.
THE FOREST.						
Fur and peltry	340,000	170	$31	48,000	24	$4
Product of wood.						
Boards and scantling, feet	553,217,400	922,029	448,515	563,477,400	939,129	591,910
Shingles, M	86,840	10,855	6,931	79,448	9,931	7,022
Timber, cubic feet	8,560,650	171,213	104,938	5,844,000	116,880	108,586
Staves, lbs	348,464,000	174,232	135,006	320,552,000	160,276	150,085
Wood, cords	124,687	349,123	18,507	89,807	251,460	14,447
Ashes, pot and pearl, bbls	3,876	1,066	1,131	4,440	1,221	369
Total of the forest	....	1,628,688	$715,059	....	1,478,921	$872,423
AGRICULTURE. *Product of animals.*						
Pork, bbls	282,325	45,172	$49,886	77,806	12,449	$14,930
Beef, bbls	92,494	14,799	19,352	104,956	16,794	19,789
Bacon, lbs	3,712,000	1,856	1,139	764,000	382	181
Cheese, lbs	11,228,000	5,614	2,454	7,796,000	3,898	1,691
Butter, lbs	6,812,000	3,406	1.814	2,248	1.124	606
Lard, tallow and lard oil, lbs	21,302,000	10,651	10,457	3,794	1,897	1,633
Wool, lbs	2,664,000	1.332	735	3,370	1,685	1,422

Hides, lbs	9,590,000	4,795	3,579	10,538	5,269	4,430
Total product of animals	....	87,625	$89,426	....	43,498	$44,682
Vegetable food.						
Flour, bbls	1,930,731	208,519	$282,182	1,474,582	159,255	$202,769
Wheat, bush	26,577,166	797,315	1,275,680	19,932,067	597,962	972,877
Rye, bush	592,571	16,592	34,488	670,178	18,765	30,642
Corn, bush	22,287,036	624,037	955,226	11,086,536	310,423	486,932
Corn meal, bbls	44,704	4,828	5,224	51,305	5,541	2,699
Barley, bush	3,816,458	91,595	93,477	3,232,292	77,575	74,525
Barley malt, bush	366,242	6,043	6,963	565,294	9,610	10,556
Oats, bush	16,040,937	256,655	250,729	15,122,937	241,967	342,913
Bran and ship stuffs, lbs	45,282,000	22,641	15,701	41,872,000	20,936	15,349
Peas and beans, bush	530,700	15,921	18,675	550,000	16,500	19,369
Apples, bbls	854,440	64,083	60,756	373,026	27,977	23,546
Potatoes, bush	1,173,233	35,197	12,496	1,234,433	37,033	12,612
Dried fruit, lbs	1,316,000	658	1,226	674,000	337	526
Total vegetable food	....	2,144,084	$3,012,823	....	1,523,881	$2,195,315
All other agricultural products.						
Cotton, lbs	304,200	152	$22	424,000	212	$23
Unmanufactured tobacco, lbs	770,000	385	81	854,000	427	140
Hemp, lbs	470,000	235	48	572,000	286	47
Clover and grass seed, lbs	724,000	362	705	580,000	290	1,022
Flax seed lbs	5,844,000	2,922	3,168	8,046,000	4,023	5,057

STATEMENT No. 53 — (*Continued.*)

ARTICLES.	1863.			1864.		
	Quantity.	Tons.	Tolls.	Quantity.	Tons.	Tolls.
Hops, lbs	620,000	310	$170	438,000	219	$66
Total all other agricultural products	....	4,366	$4,194	....	5,457	$6,355
Total agricultural products	....	2,236,075	$3,106,443	....	1,572,836	$2,246,352
MANUFACTURES.						
Domestic spirits, gallons	3,334,750	13,339	$16,248	2,563,000	10,252	$14,291
Oil meal and cake, lbs	7,538,000	3,769	5,441	11,986,000	5,948	7,519
Leather, lbs	8,474,000	4,237	2,030	7,106,000	3,553	1,576
Furniture, lbs	7,256,000	3,628	3,917	6,270,000	3,135	4,298
Bar and pig lead, lbs	7,110,000	3,555	2,594	2,472,000	1,236	740
Pig iron, lbs	97,588,000	48,794	29,614	70,018,000	35,009	24,364
Bloom and bar iron, lbs	18,636,000	9,318	2,484	24,354,000	12,177	3,615
Castings and ironware, lbs	25,726,000	12,863	18,947	24,236,000	12,118	19,740
Domestic woolens, lbs	20,000	10	7	42,000	21	11
Domestic cottons, lbs	32,000	166	31	398,000	199	84
Domestic salt, lbs	419,996,000	209,998	47,660	384,124,000	192,062	65,979
Foreign salt, lbs	19,510,000	9,755	8,044	13,288,000	6,644	5,530
Total manufactures	....	319,432	$137,017	....	282,354	$147,747
MERCHANDISE.						
Sugar, lbs	41,912,000	20,956	$7,590	23,434,000	11,717	$3,367

Molasses, lbs	19,998,000	9,999	3,616	17,224,000	8,612	3,203
Coffee, lbs	1,582,000	791	786	858,000	429	403
Nails, spikes and horseshoes, lbs	11,780,000	5,890	1,400	6,782,000	3,391	1,248
Iron and steel, lbs	25,620,000	12,810	3,110	10,410,000	5,205	1,605
Railroad iron, lbs	70,524,000	35,262	37,640	77,956,000	39,978	43,862
Flint enamel, crockery and glassware, lbs	10,528,000	5,264	2,631	8,514,000	4,257	1,948
All other merchandise, lbs	162,612,000	81,306	80,480	140,790,000	70,395	62,056
Total merchandise	....	172,278	$137,253	....	143,984	$117,692
OTHER ARTICLES.						
Live cattle, hogs and sheep, lbs	104,009	52	$22	170,000	85	$19
Stone, lime and clay, lbs	304,294,000	152,147	31,160	353,740,000	176,870	36,195
Gypsum, lbs	91,806,000	45,903	6,961	67,546,000	33,773	8,749
Mineral coal, lbs	....	....	....	....	....	....
Anthracite coal, lbs	996,272,000	498,136	115,871	971,164,000	485,582	140,581
Bituminous coal, lbs	469,042,000	234,521	44,732	738,962,000	369,481	89,726
Copper ore, lbs	5,742,000	2,871	4,753	3,442,000	1,721	17,643
Iron ore, lbs	297,052,000	148,526	27,264	362,428,000	181,214	19,445
Sundries, lbs	238,126,000	119,063	76,324	252,240,000	126,120	71,864
Total other articles	....	1,201,219	$307,087	....	1,374,846	$384,222
Total	....	5,559,692	$4,402,859	....	4,852,941	$3,968,436
Add tolls on boats and passengers	....	....	242,348	....	....	215,546
Total tolls	....	....	$4,645,207	....	....	$3,983,982

STATEMENT No. 53 – (*Continued.*)

ARTICLES.	1865.			1866.		
	Quantity.	Tons.	Tolls.	Quantity.	Tons.	Tolls.
THE FOREST.						
Fur and peltry, lbs	220,000	110	$27	836,000	418	$275
Product of wood.						
Boards and scantling, ft	561,099,000	935,165	505,262	722,081,400	1,203,469	698,696
Shingles, M	71,560	8,945	6,385	163,528	20,441	9,840
Timber, cubic feet	7,060,100	141,202	98,296	8,038,900	160,778	77,842
Staves, lbs	268,786,000	134,393	116,562	304,784,000	152,374	140,530
Wood, cords	87,669	245,474	13,902	82,816	231,884	13,258
Ashes, pot and pearl, bbls	7,367	2,026	868	2,299	630	247
Total of the forest	....	1,467,315	$741,302	....	1,769,994	$940,688
AGRICULTURE. *Product of animals.*						
Pork, bbls	27,944	4,471	$4,218	11,100	1,776	$663
Beef, bbls	9,450	1,512	1,997	2,443	391	562
Bacon, lbs	1,596,000	798	493	66,000	33	3
Cheese, lbs	21,890,000	10,945	4,811	15,468,000	7,734	3,210
Butter, lbs	2,314,000	1,157	673	1,180,000	590	336
Lard, tallow and lard oil, lbs	2,316,000	1,158	1,048	298,000	149	75
Wool, lbs	2,044,000	1,022	1,005	2,952,000	1,476	626

Hides, lbs	12,356,000	6,178	4,525	13,322,000	6,661	4,891
Total product of animals	....	27,241	$18,770	....	18,810	$10,366
Vegetable food.						
Flour, bbls	1,271,129	137,282	$162,919	751,870	81,202	$84,006
Wheat, bush	14,433,566	433,007	626,154	10,989,800	329,694	442,345
Rye, bush	1,220,714	34,180	54,596	1,751,928	49,054	80,305
Corn, bush	20,689,500	379,306	920,084	28,904,143	809,316	1,293,628
Corn meal, bbls	24,018	2,594	2,465	17,972	1,941	1,945
Barley, bush	5,336,416	128,074	136,644	7,867,041	188,809	238,768
Barley malt, bush	725,151	11,965	15,789	298,212	9,841	12,714
Oats, bush	11,973,937	191,583	262,823	12,138,250	194,212	288,007
Bran and ship stuffs, lbs	48,304,000	24,152	17,031	48,762,000	24,381	17,449
Peas and beans, bush	401,533	12,046	14,258	536,667	16,100	21,739
Apples, bbls	757,906	56,483	47,518	232,373	17,428	16,993
Potatoes, bush	17,158,000	51,474	18,066	1,394,233	41,827	14,287
Dried fruit, lbs	382,000	191	267	252,000	126	100
Total vegetable food	....	1,662,697	$2,281,614	....	1,763,931	$2,512,286
All other vegetable products.						
Cotton, lbs	1,530,000	765	$234	2,060,000	1,030	$221
Unmanufactured tobacco, lbs	1,598,000	799	230	1,010,000	505	137
Hemp, lbs	424,000	212	47	120,000	60	16
Clover and grass seed, lbs	704,000	352	466	810,000	405	876
Flax seed, lbs	7,022,000	3,511	2,916	1,848,000	924	625

STATEMENT No. 53 — (*Continued.*)

ARTICLES.	1865.			1866.		
	Quantity.	Tons.	Tolls.	Quantity.	Tons.	Tolls.
Hops, lbs	1,028,000	514	$134	790,000	395	$123
Total all other agricultural products	....	6,153	$4,027	....	3,319	$1,998
Total agricultural products	....	1,696,091	$2,304,411	....	1,786,060	$2,524,650
MANUFACTURES.						
Domestic spirits, gals	521,000	2,084	$2,533	232,500	930	$647
Oil, meal and cake, lbs	9,358,000	4,679	5,809	4,190,000	2,095	2,800
Leather, lbs	8,680,000	4,340	1,419	10,230,000	5,115	1,898
Furniture, lbs	6,156,000	3,078	2,907	5,990,000	2,995	2,750
Bar and pig lead, lbs	11,464,000	5,732	1,673	524,000	262	390
Pig iron, lbs	78,004,000	39,002	23,774	102,168,000	51,084	39,050
Bloom and bar iron, lbs	23,794,000	11,987	3,903	23,236,000	11,618	3,092
Castings and ironware, lbs	26,642,000	13,321	22,827	31,658,000	15,829	26,955
Domestic woolens, lbs	200,000	100	20	348,000	174	35
Domestic cottons, lbs	610,000	305	86	604,000	302	102
Domestic salt, lbs	374,074,000	187,037	70,543	414,332,000	207,166	73,168
Foreign salt, lbs	20,514,000	10,257	8,596	9,342,000	4,671	2,485
Total manufactures	....	281,832	$144,090	....	302,241	$153,372
MERCHANDISE.						
Sugar, lbs	24,536,000	12,268	$6,733	39,526,000	19,763	$6,853

Molasses, lbs	19,368,000	9,684	4,466	17,810,000	8,905	3,229
Coffee, lbs	1,880,000	940	938	1,190,000	595	405
Nails, spikes and horseshoes, lbs	7,674,000	3,837	1,424	12,304,000	6,152	1,563
Iron and steel, lbs	5,880,000	2,940	988	12,398,000	6,199	1,399
Railroad iron, lbs	55,046,000	27,523	32,132	80,864,000	40,432	43,703
Flint enamel, crockery and glass ware, lbs	9,100,000	4,550	2,170	8,368,000	4,184	1,547
All other merchandise, lbs	186,452,000	93,226	63,028	187,296,000	93,648	72,317
Total merchandise	....	154,968	$111,879	....	179,878	$131,021
OTHER ARTICLES.						
Live cattle, hogs and sheep, lbs	180,000	90	$90	92,000	46	$34
Stone, lime and clay, lbs	360,708,000	180,354	37,033	470,202,000	235,101	47,314
Gypsum, lbs	73,022,000	36,511	3,106	119,448,000	59,724	10,795
Mineral coal, lbs	....	....	....	....	....	....
Anthracite coal, lbs	866,304,000	433,152	125,247	1,381,224,000	690,612	207,948
Bituminous coal, lbs	575,062,000	287,531	87,809	892,002,000	446,001	86,807
Copper ore, lbs	2,698,000	1,349	909	4,146,000	2,073	1,431
Iron ore, lbs	189,886,000	94,943	14,926	367,874,000	183,937	28,675
Sundries, lbs	191,036,000	95,518	70,549	239,106,000	119,553	75,436
Total other articles	....	1,129,448	$344,669	....	1,737,047	$458,440
Total	....	4,729,654	$3,646,351	....	5,775,200	$4,208,171
Add tolls on boats and passengers	....	....	193,064	....	....	228,468
Total tolls	....	....	$3,839,955	....	....	$4,436,639

STATEMENT No. 53—(*Continued.*)

ARTICLES.	1867.			1868.		
	Quantity.	Tons.	Tolls.	Quantity.	Tons.	Tolls.
THE FOREST.						
Fur and peltry, lbs	566,000	283	$184	22,000	11	$47
Product of wood.						
Boards and scantling, ft	786,003,600	1,310,006	777,568	880,224,000	1,467,040	848,598
Shingles, M	116,304	14,538	8,974	136,608	17,076	11,490
Timber, cubic feet	5,537,110	110,742	80,231	4,334,400	86,688	53,541
Staves, lbs	321,694,000	160,847	143,637	437,684,000	218,842	152,901
Wood, cords	48,353	135,387	8,503	54,560	152,769	8,174
Ashes, pot and pearl, bbls	45,269	12,449	530	57,756	15,883	686
Total of the forest	....	1,744,252	$1,019,627	....	1,958,309	$1,075,437
AGRICULTURE. *Product of animals.*						
Pork, bbls	5,687	910	$388	5,112	818	$330
Beef, bbls	1,713	274	91	2,194	351	142
Bacon, lbs	92,000	46	197	....	....	....
Cheese	13,400,000	6,700	2,169	15,352,000	7,676	1,830
Butter, lbs	1,494,000	747	225	1,942,000	971	215
Lard, tallow and lard oil, lbs	1,754,000	877	683	1,214,000	607	543
Wool, lbs	1,862,000	931	470	2,248,000	1,124	468

Hides, lbs.	12,258,000	6,129	4,575	13,058,000	6,529	3,749
Total product of animals	....	16,614	$8,798	....	18,076	$7,277
Vegetable food.						
Flour, bbls.	569,334	61,497	$67,920	575,898	62,197	$56,551
Wheat, bush.	13,630,300	408,909	639,429	14,425,567	432,767	665,403
Rye, bush.	1,044,643	29,250	48,773	873,357	24,454	40,494
Corn, bush.	4,468,649	502,054	771,376	18,437,107	516,239	784,613
Corn meal, bbls.	12,808	1,383	878	14,861	1,605	838
Barley, bush.	4,972,250	119,334	149,413	3,698,083	88,754	95,007
Barley malt, bush.	479,818	7,917	7,645	257,029	4,488	8,936
Oats, bush.	10,476,000	167,616	273,493	11,927,156	190,836	303,382
Bran and ship stuffs, lbs.	25,266,000	12,633	8,106	32,362,000	16,181	10,337
Peas and beans, bush.	827,133	24,814	31,498	391,667	11,750	13,126
Apples, bbls.	566,653	42,499	40,226	420,307	31,523	25,100
Potatoes, bush.	1,262,067	37,862	12,281	1,043,100	31,293	13,121
Dried fruit, lbs.	238,000	119	264	176,000	88	143
Total vegetable food	....	1,415,887	$2,051,302	....	1,419,175	$2,017,051
All other agricultural products.						
Cotton, lbs.	1,564,000	782	$224	1,406,000	703	$133
Unmanufactured tobacco, lbs.	1,044,000	522	112	436,000	218	256
Hemp, lbs.	52,000	26	2	4,000	2	....
Clover and grass seed. lbs.	1,190,000	595	1,495	924,000	462	1,017
Flax seed, lbs.	7,906,000	3,953	4,050	6,838,000	3,419	3,298

STATEMENT No. 53 — (*Continued.*)

ARTICLES.	1867.			1868.		
	Quantity.	Tons.	Tolls.	Quantity.	Tons.	Tolls.
Hops, lbs.	276,000	138	$99	184,000	92	$21
Total all other agricultural products	....	6,016	$5,982	....	4,896	$4,725
Total agricultural products	....	1,438,517	$2,066,082	....	1,442,147	$2,029,053
MANUFACTURES.						
Domestic spirits, gals.	94,250	377	$266	84,500	338	$166
Oil meal and cake, lbs.	4,938,000	2,469	3,237	4,244,000	2,122	938
Leather, lbs.	11,206,000	5,603	1,973	10,770,000	5,385	2,174
Furniture, lbs.	4,906,000	2,453	2,247	5,904,000	2,952	2,626
Bar and pig lead, lbs.	998,000	499	306	224,000	112	99
Pig iron, lbs.	92,980,000	46,490	28,144	118,868,000	59,434	34,070
Bloom and bar iron, lbs.	21,056,000	10,528	2,835	15,314,000	7,657	2,092
Castings and ironware, lbs.	32,670,000	16,335	30,329	40,414,000	20,207	27,603
Domestic woolens, lbs.	310,000	155	69	284,000	142	72
Domestic cottons, lbs.	672,000	336	111	918,000	459	158
Domestic salt, lbs.	459,280,000	229,640	63,581	533,520,000	266,760	69,771
Foreign salt, lbs.	11,918,000	5,959	4,690	15,388,000	7,694	6,925
Total manufactures	....	320,844	$137,788	....	373,262	$146,694
MERCHANDISE.						
Sugar, lbs.	33,326,000	16,663	$5,658	35,634,000	17,817	$7,742

Molasses, lbs	16,066,000	8,033	3,199	22,646,000	11,323	4,082
Coffee, lbs	902,000	451	453	1,480,000	740	370
Nails, spikes and horseshoes, lbs	10,882,000	5,441	1,652	8,424,000	4,212	1,332
Iron and steel, lbs	11,278,000	5,639	1,808	14,654,000	7,327	2,504
Railroad iron, lbs	146,900,000	73,450	70,556	299,470,000	149,735	98,371
Flint enamel, crockery and glassware, lbs	12,378,000	6,189	2,297	11,424,000	5,712	2,574
All other merchandise, lbs	208,028,000	104,014	77,745	254,396,000	127,198	89,420
Total merchandise	....	219,880	$163,368	....	324,064	$206,395
OTHER ARTICLES.						
Live cattle, hogs and sheep, lbs	192,000	96	$20	52,000	26	$12
Stone, lime and clay, lbs	487,660,000	243,830	52,764	474,560,000	237,280	56,115
Gypsum, lbs	84,920,000	42,460	13,001	113,894,000	56,947	13,035
Mineral coal, lbs	....	....	....	....	....	....
Anthracite coal, lbs	1,546,240,000	773,120	227,169	2,114,776,000	1,057,388	290,453
Bituminous coal, lbs	1,018,948,000	509,474	97,801	1,108,602,000	554,301	110,831
Copper ore, lbs	4,760,000	2,380	1,662	850,000	425	293
Iron ore, lbs	382,878,000	191,439	26,205	420,750,000	210,375	28,970
Sundries, lbs	402,066,000	201,033	79,695	455,402,000	227,701	99,978
Total other articles	....	1,964,832	$498,317	....	2,344,443	$599,687
Total	....	5,688,325	$3,885,182	....	6,442,225	$4,057,266
Add tolls on boats and passengers	....	....	202,876	....	....	189,297
Total tolls	....	....	$4,088,058	....	....	$4,246,563

STATEMENT No. 53 — (*Continued.*)

ARTICLES.	1869.			1870.		
	Quantity.	Tons.	Tolls.	Quantity.	Tons.	Tolls.
THE FOREST.						
Fur and peltry, lbs.	22,000	11	$14	2,000	1	....
Product of wood.						
Boards and scantling, feet	902,850,000	1,504,750	888,048	935,967,600	1,599,946	$768,144
Shingles, M	126,416	15,802	9,386	141,008	17,628	10,097
Timber, cubic feet	5,801,350	116,027	53,307	4,270,300	85,406	54,632
Staves, lbs.	202,054,000	101,027	84,806	291,516,000	145,758	77,220
Wood, cords	32,498	90,995	5,358	35,054	98,150	5,369
Ashes, pot and pearl, bbls.	99,338	27,318	476	34,982	9,624	2,086
Total of the forest	....	1,855,930	$1,041,395	....	1,916,513	$917,556
AGRICULTURE.						
Product of animals.						
Pork, bbls.	3,325	532	$157	1,062	170	$44
Beef, bbls.	150	24	11	1,325	212	52
Bacon, lbs.	....	....	....	....	....	....
Cheese, lbs.	8,046,000	4,023	1,673	10,432,000	5,216	1,610
Butter, lbs.	1,110,000	555	164	758,000	379	136
Lard, tallow and lard oil, lbs.	240,000	120	71	84,000	42	10
Wool, lbs.	2,174,000	1,087	241	2,228,000	1,114	302
Hides, lbs.	4,700,000	2,350	823	7,144,000	3,572	869
Total product of animals	....	8,691	$3,140	....	10,705	$3,024

Vegetable food.						
Flour, bbls..................	657,870	71,051	$73,237	509,055	54,978	$29,171
Wheat, bush..................	22,251,133	670,534	1,048,658	21,950,800	658,524	498,632
Rye, bush....................	481,750	13,489	13,009	697,143	19,520	13,783
Corn, bush...................	9,159,643	256,475	330,067	6,893,893	193,129	161,338
Corn meal, bbls..............	12,666	1,368	1,432	12,250	1,323	23
Barley, bush.................	4,125,500	99,012	105,354	5,132,958	123,191	73,706
Barley malt, bush............	330,400	5,782	5,864	798,686	13,977	11,775
Oats, bush...................	5,769,312	92,309	114,532	7,371,312	117,941	93,833
Bran and ship stuffs, lbs......	34,176,000	17,088	10,815	28,014,000	14,007	5,046
Peas and beans, bush.........	379,233	11,377	5,823	226,123	6,784	3,710
Apples, bbls.................	510,213	38,266	36,805	896,547	67,241	50,850
Potatoes, bush...............	858,300	25,749	9,906	810,100	24,303	10,055
Dried fruit, lbs.............	226,000	113	52	180,000	90	42
Total vegetable food........	....	1,302,613	$1,755,554	....	1,295,008	$951,964
All other agricultural products.						
Cotton, lbs..................	752,000	376	$121	1,412,000	706	$136
Unmanufactured tobacco, lbs..	502,000	251	81	340,000	170	36
Hemp, lbs....................	68,000	34	4	44,000	22	9
Clover and grass seed, lbs.....	184,000	92	13	12,000	6	5
Flax seed, lbs...............	3,360,000	1,680	459	4,916,000	2,458	1,033
Hops, lbs....................	668,000	334	109	152,000	76	20
Total all other agri'l prod'ts.	....	2,767	$787	....	3,438	$2,239
Total agricultural products..	....	1,314,071	$1,759,481	....	1,309,151	$957,227
MANUFACTURES.						
Domestic spirits, gals.........	420,000	1,682	$345	143,250	673	$124
Oil meal and cake, lbs.... ...	4,092,000	2,046	362	3,114,000	1,557	195
Leather, lbs.................	4,976,000	2,488	844	3,806,000	1,903	518

STATEMENT No. 53—(*Continued.*)

ARTICLES.	1869.			1870.		
	Quantity.	Tons.	Tolls.	Quantity.	Tons.	Tolls.
Furniture, lbs.	4,248,000	2,124	$724	2,684,000	1,342	$400
Bar and pig lead, lbs.	152,000	76	2,491	1,010,000	505	380
Pig iron, lbs.	83,968,000	41,984	10,720	90,178,000	45,089	9,115
Bloom and bar iron, lbs.	28,068,000	14,034	2,507	27,556,000	13,778	2,111
Castings and iron ware, lbs.	28,396,000	14,198	10,579	20,872,000	10,436	6,554
Domestic woolens, lbs.	504,000	252	103	458,000	229	71
Domestic cottons, lbs.	1,404,000	702	208	690,000	345	156
Domestic salt, lbs.	517,854,000	258,927	73,722	526,874,000	263,437	52,390
Foreign salt, lbs.	7,452,000	3,726	1,784	6,606,000	3,303	1,145
Total manufactures	....	342,239	$104,389	....	342,497	$73,259
MERCHANDISE.						
Sugar, lbs.	26,412,000	13,206	$6,088	33,188,000	16,594	$6,658
Molasses, lbs.	15,250,000	7,625	3,252	21,158,000	10,579	3,269
Coffee, lbs.	928,000	464	272	918,000	459	222
Nails, spikes and horseshoes, lbs.	13,242,000	6,626	3,574	20,882,000	10,441	3,255
Iron and steel, lbs.	5,620,000	2,810	1,591	19,928,000	9,964	1,874
Railroad iron, lbs.	275,354,000	137,677	96,859	271,860,000	135,930	66,123
Flint enamel, crock'ry and glassware, lbs.	12,664,000	6,332	2,972	9,714,000	4,857	2,140
All other merchandise, lbs.	188,460,000	94,230	51,552	166,064,000	83,032	48,614
Total merchandise	....	268,970	$166,160	....	271,856	$132,155

OTHER ARTICLES.						
Live cattle, hogs and sheep, lbs.	62,000	31	$13	26,000	13	$8
Stone, lime and clay, lbs.......	603,180,000	301,594	42,596	630,712,000	315,356	38,044
Gypsum, lbs.................	122,662,000	61,331	7,185	68,796,000	34,398	4,787
Mineral coal, lbs.............	....	....	....	....	....	....
Anthracite coal, lbs..........	1,312,208,000	656,104	167,930	1,792,520,000	896,260	115,674
Bituminous coal, lbs.	1,336,608,000	668,304	133,725	1,323,850,000	661,925	82,201
Copper ore, lbs..............	554,000	277	207	....	....	....
Iron ore, lbs................	367,984,000	183,992	24,385	477,604,000	238,802	18,946
Sundries, lbs................	412,482,000	206,241	160,401	373,996,000	186,998	96,966
Total other articles	....	2,077,870	$536,442	....	2,333,752	$356,656
Total....................	....	5,859,080	$3,607,867	....	6,173,769	$2,436,753
Add tolls on boats and pass'gers,	....	....	170,634	....	....	174,825
Total tolls	....	....	$3,778,501	....	....	$2,611,578

STATEMENT No. 53 — (*Continued*).

ARTICLES.	1871.			1872.		
	Quantity.	Tons.	Tolls.	Quantity.	Tons.	Tolls.
THE FOREST.						
Fur and peltry, lbs	....	....	....	6,000	3	$1
Product of wood.						
Boards and scantling, feet	890,206,800	1,483,678	$710,137	1,003,032,600	1,671,721	749,548
Shingles, M	407,624	197,953	9,159	94,784	11,848	6,531
Timber, cubic feet	3,476,300	69,526	48,301	3,479,250	69,585	40,697
Staves, lbs	195,196,000	97,598	52,273	229,148,000	114,574	72,622
Wood, cords	29,235	81,860	5,340	29,213	81,796	4,873
Ashes, pot and pearl, bbls	38,843	10,682	2,134	4,622	1,271	313
Total of the forest	....	1,941,297	$827,344	....	1,950,798	$874,585
AGRICULTURE.						
Product of animals.						
Pork, bbls	4,106	657	$227	6,156	985	$87
Beef, bbls	1,275	204	62	10,200	1,632	94
Bacon, lbs	....	....	....	22,000	11	21
Cheese, lbs	6,394,000	3,197	861	3,094,000	1,547	457
Butter, lbs	204,000	102	48	54,000	27	12
Lard, tallow and lard oil, lbs	422,000	211	51	104,000	52	118

Wool, lbs	2,268,000	1,134	290	942,000	471	116
Hides, lbs	6,276,000	3,138	680	2,028,000	1,014	385
Total product of animals	....	8,643	$2,219	....	5,739	$1,290
Vegetable food.						
Flour, bbls	381,583	41,211	$20,770	190,129	20,534	$8,433
Wheat, bush	24,951,633	748,549	558,227	13,463,433	403,903	231,841
Rye, bush	1,234,392	34,563	30,911	477,036	13,357	9,654
Corn, bush	24,002,035	672,057	565,722	32,241,179	902,753	896,854
Corn meal, bbls	6,611	714	44	6,046	653	207
Barley, bush	4,749,662	113,992	68,374	5,002,542	120,061	79,873
Barley malt, bush	801,371	14,024	12,824	1,578,914	27,631	17,147
Oats, bush	8,118,187	129,891	108,184	5,809,938	92,959	82,430
Bran and ship stuffs, lbs	21,478,000	10,739	4,741	22,622,000	11,331	3,627
Peas and beans, bush	162,700	4,881	2,443	146,600	4,398	1,707
Apples, bbls	531,266	39,845	42,825	449,254	33,694	27,125
Potatoes, bush	1,317,800	39,534	7,452	1,431,200	42,936	10,279
Dried fruit, lbs	396,000	198	101	220,000	110	137
Total vegetable food	....	1,850,198	$1,422,636	....	1,674,320	$1,469,314
All other agricultural products.						
Cotton, lbs	1,266,000	633	$182	1,556,000	778	$89
Unmanufactured tobacco, lbs	302,000	151	34	260,000	130	48
Hemp, lbs	10,000	5	....	110,000	55	9
Clover and grass seed, lbs	60,000	30	24	....	....	98

STATEMENT No. 53 — (*Continued*).

ARTICLES.	1871.			1872.		
	Quantity.	Tons.	Tolls.	Quantity.	Tons.	Tolls.
Flax seed, lbs.	10,230,000	4,115	$3,349	5,832,000	2,916	$2,034
Hops, lbs	186,000	93	27	48,000	24	8
Total all other agricul. products,	....	5,027	$3,616	....	3,903	$2,286
Total agriculture	....	1,863,868	$1,428,471	....	1,683,962	$1,472,890
MANUFACTURES.						
Domestic spirits, gals	165,750	423	$114	64,250	257	$39
Oil meal and cake, lbs	3,888,000	1,944	247	4,042,000	2,021	273
Leather, lbs	2,188,000	1,094	255	874,000	437	102
Furniture, lbs	2,496,000	1,248	416	1,190,000	595	231
Bar and pig lead, lbs	960,000	480	924	380,000	190	252
Pig iron, lbs	114,418,000	57,209	8,949	110,246,000	55,123	8,476
Bloom and bar iron, lbs	31,092,000	15,546	2,175	22,330,000	11,165	1,676
Castings and iron ware, lbs	16,512,000	8,256	5,538	14,256,000	7,133	3,716
Domestic woolens, lbs	1,220,000	610	101	40,000	20	3
Domestic cottons, lbs	1,538,000	769	61	130,000	65	14
Domestic salt, lbs	492,440,000	246,220	59,643	488,444,000	244,222	54,978
Foreign salt, lbs	4,978,000	2,489	1,094	8,672,000	4,336	1,821
Total manufactures	....	336,288	$79,517	....	325,564	$71,581

MERCHANDISE.						
Sugar, lbs.	25,596,000	12,798	$5,387	30,268,000	15,134	$5,169
Molasses, lbs.	16,234,000	8,117	2,455	21,954,000	10,977	2,597
Coffee, lbs.	910,000	405	200	746,000	373	288
Nails, spikes and horseshoes, lbs.	18,658,000	9,329	2,715	18,818,000	9,409	3,319
Iron and steel, lbs.	19,940,000	9,970	1,678	28,332,000	14,166	3,425
Railroad iron, lbs.	356,538,000	178,269	97,170	323,334,000	161,667	97,914
Flint enamel, crockery and glassware, lbs.	8,854,000	4,427	1,908	8,356,000	4,178	1,712
All other merchandise	130,226,000	65,113	28,686	165,708,000	82,854	46,279
Total merchandise	....	288,428	$140,199	....	298,758	$160,703
OTHER ARTICLES.						
Live cattle, hogs and sheep, lbs.	16,000	8	$17	4,000	2	$1
Stone, lime and clay, lbs.	686,508,000	343,254	40,162	796,376,000	398,188	40,474
Gypsum, lbs.	72,668,000	36,334	3,957	81,070,000	40,535	5,686
Mineral coal, lbs.	....	....	....	1,873,586,000	....	111,979
Anthracite coal, lbs.	1,204,088,000	602,044	71,990	1,051,594,000	936,793	64,771
Bituminous coal, lbs.	183,986,000	591,993	68,151	....	525,797	....
Copper ore, lbs.	246,000	123	1	....	....	....
Iron ore, lbs.	579,904,000	289,952	24,443	755,184,000	377,592	32,571
Sundries, lbs.	348,598,000	174,299	229,165	270,762,000	135,381	41,141
Total other articles	....	2,038,007	$437,886	....	2,414,288	$296,558
Total	....	6,467,888	....	....	6,673,370	....
Add tolls on boats and passengers,	....	....	$187,421	....	....	$196,094
Total tolls	....	....	$3,100,838	....	....	$3,072,411

STATEMENT No. 53.—(*Continued*).

ARTICLES.	1873.			1874.		
	Quantity.	Tons.	Tolls.	Quantity.	Tons.	Tolls.
THE FOREST.						
Fur and peltry, lbs	56,000	28	$13	....	....	....
Product of wood.						
Boards and scantling, feet	780,359,400	1,300,599	632,369	730,347,000	1,217,245	$581,855
Shingles, M	57,720	7,215	4,768	83,888	10,486	7,926
Timber, cubic feet	3,613,050	72,261	48,582	4,126,850	82,537	62,092
Staves, lbs	223,776,000	111,888	68,527	194,438,000	97,219	60,769
Wood, cords	31,926	89,392	5,589	26,586	74,441	5,690
Ashes, pot and pearl, bbls	2,506	689	258	3,000	825	95
Total of the forest	....	1,582,072	$760,106	....	1,482,753	$718,427
AGRICULTURE.						
Product of animals.						
Pork, bbls	919	147	$22	944	151	$19
Beef, bbls	....	....	....	19	3	1
Bacon, lbs	16,000	8	4	....	....	....
Cheese, lbs	2,852,000	1,426	329	3,262,000	1,631	395
Butter, lbs	20,000	10	7	42,000	21	9
Lard, tallow and lard oil, lbs	42,000	21	8	156,000	78	19

Wool, lbs	1,420,000	710	166	880,000	440	87
Hides, lbs	982,000	491	219	468,000	234	104
Total product of animals	....	2,813	$755	....	2,558	$634
Vegetable food.						
Flour, lbs	181,731	19,307	$8,563	269,759	29,134	$12,116
Wheat, bush	26,768,800	803,064	736,199	25,738,766	772,163	695,003
Rye, bush	1,077,143	30,160	25,760	293,393	8,215	4,504
Corn, bush	22,760,571	637,296	602,329	18,542,964	519,203	500,297
Corn meal, bbls	9,342	1,009	169	8,314	898	162
Barley, bush	2,941,083	70,586	42,233	4,110,584	98,654	42,264
Barley malt, bush	1,182,466	17,737	12,923	453,200	6,798	7,215
Oats, bush	4,376,437	70,023	60,525	3,713,000	59,408	52,389
Bran and ship stuffs, lbs	18,534,000	9,267	3,245	8,376,000	4,188	1,147
Peas and beans, bush	393,300	11,799	2,327	200,566	6,017	4,280
Apples, bbls	422,347	34,176	40,779	676,320	50,724	38,507
Potatoes, bush	1,356,000	40,680	9,864	7,073,133	212,194	13,809
Dried fruit, lbs	134,000	67	61	4,000	2	100
Total vegetable food	....	1,745,171	$1,544,977	....	1,767,598	$1,371,793
All other agricultural products.						
Cotton, lbs	2,344,000	1,172	$118	870,000	435	$49
Unmanufactured tobacco, lbs	132,000	66	14	32,000	16	11
Hemp, lbs	144,000	72	8	98,000	49	5
Clover and grass seed, lbs	30,000	15	13	114,000	57	47

STATEMENT No. 53 — (*Continued*).

ARTICLES.	1873.			1874.		
	Quantity.	Tons.	Tolls.	Quantity.	Tons.	Tolls.
Flax seed, lbs	2,206,000	1,103	$168	3,364,000	1,682	$465
Hops, lbs	12,000	6	2	376,000	188	9
Total all other agricul'al prod'ts	....	2,434	$323	....	2,427	$586
Total agriculture	....	1,750,418	$1,546,055	....	1,772,583	$1,373,013
MANUFACTURES.						
Domestic spirits, gals	68,750	275	$31	41,750	167	$44
Oil meal and cake, lbs	4,440,000	2,220	334	4,918,000	2,459	358
Leather, lbs	364,000	182	39	426,000	213	43
Furniture, lbs	1,156,000	528	159	830,000	415	142
Bar and pig lead, lbs	240,000	120	30	346,000	173	174
Pig iron, lbs	53,808,000	26,904	4,064	80,784,000	40,392	5,253
Bloom and bar iron, lbs	24,230,000	12,115	1,614	55,670,000	22,835	3,319
Castings and iron ware, lbs	17,410,000	8,705	6,728	12,068,000	6,034	4,407
Domestic woolens, lbs	60,000	30	7	114,000	57	14
Domestic cottons, lbs	70,000	35	8	724,000	362	50
Domestic salt, lbs	425,460,000	212,730	53,615	335,602,000	167,801	45,542
Foreign salt, lbs	7,952,000	3,976	1,907	11,578,000	5,789	2,568
Total manufactures	....	267,820	$68,542	....	246,697	$61,914

MERCHANDISE.						
Sugar. lbs	30,596,000	15,298	$4,537	31,566,000	15,783	$5,453
Molasses, lbs	22,092,000	11,046	2,713	17,846,000	8,923	2,564
Coffee, lbs	688,000	344	157	932,000	416	193
Nails, spikes and horseshoes, lbs.	10,468,000	5,234	1,219	10,084,000	5,042	1,461
Iron and steel, lbs	19,246,000	9,623	2,118	17,304,000	8,652	2,325
Railroad iron, lbs	106,736,000	53,363	30,584	49,022,000	24,511	13,470
Flint enamel, crock'ry & glass're, lbs	5,778,000	2,889	925	5,880,000	2,940	827
All other merchandise, lbs	150,386,000	75,193	37,393	131,828,000	65,914	33,817
Total	....	172,990	$79,646	....	132,181	$60,110
OTHER ARTICLES.						
Live cattle, hogs and sheep, lbs	4,000	2	$2	2,000	1	$1
Stone, lime and clay, lbs	830,608,000	415,304	42,211	734,018,000	367,009	30,769
Gypsum, lbs	105,026,000	52,573	4,835	42,578,000	21,289	2,412
Mineral coal, lbs	....	....	....	....	....	....
Anthracite coal, lbs	1,935,596,000	967,593	122,783	1,681,640,000	840,820	87,213
Bituminous coal, lbs	1,316,532,000	658,266	83,772	1,144,684,000	572,342	75,973
Copper ore, lbs	....	....	....	....	....	....
Iron ore, lbs	931,936,000	415,968	31,763	465,088,000	232,544	15,490
Sundries, lbs	173,672,000	81,836	47,203	272,738,000	136,369	51,394
Total other articles	....	2,591,482	$332,569	....	2,170,374	$263,252
Total	....	6,364,782	....	....	5,804,588	....
Add tolls on boats and passengers,	....	....	$189,800	....	....	$160,355
Total tolls	....	....	$2,976,718	....	....	$2,637,071

STATEMENT No. 53 — (*Continued*).

ARTICLES.	1875.			1876.		
	Quantity.	Tons.	Tolls.	Quantity.	Tons.	Tolls.
THE FOREST.						
Fur and peltry, lbs	....	....	....	....	....	....
Product of wood.						
Boards and scantling, feet	633,064,200	1,055,107	$302,274	607,155,000	1,011,825	$341,491
Shingles, M.	71,648	8,956	4,945	55,752	6,969	3,981
Timber, cubic feet	2,717,550	54,351	22,100	1,559,650	31,193	18,793
Staves, lbs	100,778,000	50,389	29,384	74,712,000	37,356	19,364
Wood, cords	28,050	78,541	2,664	44,505	84,613	4,358
Ashes, pot and pearl, lbs	11,644	3,202	222	11,844	3,257	476
Total of the forest	....	1,250,546	$361,589	....	1,175,313	$388,463
AGRICULTURE.						
Product of animals.						
Pork, bbls	813	130	$18	650	104	$18
Beef, bbls	....	....	....	....	....	1
Bacon, lbs	....	....	....	....	....	....
Cheese, lbs	2,562,000	1,281	187	1,220,000	610	214
Butter, lbs	46,000	23	14	256,000	128	60
Lard, tallow and lard oil, lbs	60,000	30	12	152,000	76	16

Wool, lbs.	262,000	131	22	522,000	261	37
Hides, lbs.	1,316,000	658	398	1,434,000	717	354
Total product of animals...	....	2,253	$651	....	1,896	$700
Vegetable food.						
Flour, lbs.	163,287	17,635	$6,260	86,019	9,290	$1,634
Wheat, bush.	24,809,766	744,293	466,662	13,879,200	416,376	249,232
Rye, bush	296,750	8,309	3,968	712,464	19,949	11,039
Corn, bush.	10,072,536	282,031	185,680	13,044,786	365,254	239,169
Corn meal, bbls.	3,000	324	58	232	25	35
Barley, bush	4,353,125	104,475	40,335	4,020,584	96,494	37,739
Barley malt, bush.	71,287	12,475	5,798	1,510,629	26,436	6,137
Oats, bush	3,919,813	62,717	33,391	3,259,188	52,147	27,740
Bran and ship stuffs, lbs.	7,290,000	3,645	717	11,264,000	5,632	1,341
Peas and beans, bush.	195,200	5,856	2,909	174,200	5,226	2,886
Apples, bbls.	508,200	35,574	15,186	460,069	33,355	12,635
Potatoes, bush.	939,366	28,181	12,313	1,133,933	34,018	6,697
Dried fruit, lbs.	70,000	35	11	182,000	91	39
Total vegetable food......	....	1,305,550	$773,288	....	1,064,293	$596,623
All other agricultural products.						
Cotton, lbs.	672,000	336	$29	1,048,000	524	$64
Unmanufactured tobacco, lbs...	178,000	89	29	80,000	40	15
Hemp, lbs.	163,000	53	7	40,000	20	5
Clover and grass seed, lbs.	....	....	....	58,000	29	24

STATEMENT No. 53 – (*Continued*).

ARTICLES.	1875.			1876.		
	Quantity.	Tons.	Tolls.	Quantity.	Tons.	Tolls.
Flax seed, lbs.	6,598,000	3,299	$306	1,388,000	694	$154
Hops, lbs.	66,000	33	6	2,000	1	....
Tot. all other agric'lt'l products	....	3,810	$377	....	1,308	$262
Total agriculture	....	1,311,613	$774,316	....	1,067,497	$597,585
MANUFACTURES.						
Domestic spirits, gals.	70,500	282	$29	44,750	179	$17
Oil meal and cake, lbs.	5,946,000	2,973	188	5,408,000	2,704	165
Leather, lbs.	12,000	6	2	216,000	108	5
Furniture, lbs.	912,000	456	168	640,000	320	145
Bar and pig lead, lbs.	46,000	23	7	68,000	34	13
Pig iron, lbs	118,316,000	59,158	6,835	89,341,000	44,672	4,374
Bloom and bar iron, lbs.	39,872,000	19,936	2,546	33,010,000	16,505	2,861
Castings and iron ware, lbs.	11,608,000	5,804	2,861	3,212,000	1,606	702
Domestic woolens, lbs.	64,000	32	5	4,000	2	....
Domestic cottons, lbs.	552,000	276	36	2,000	1	....
Domestic salt, lbs.	368,504,000	184,252	54,080	221,930,000	110,965	28,975
Foreign salt, lbs.	5,166,000	2,533	926	6,210,000	3,105	2,474
Total manufactures	....	275,731	$67,683	....	180,201	$39,731

MERCHANDISE.						
Sugar, lbs.	15,380,000	7,690	$1,353	6,720,000	3,360	$613
Molasses, lbs.	16,566,000	8,283	797	11,682,000	5,841	516
Coffee, lbs.	370,000	185	61	142,000	71	36
Nails, spikes and horse shoes, lbs.	7,836,000	3,918	1,079	4,362,000	2,181	287
Iron and steel, lbs.	12,978,000	6,489	1,322	8,972,000	4,486	768
Railroad iron, lbs.	73,206,000	36,603	8,477	23,382,000	11,691	1,278
Fl't enamel, cr'k'y & glass w'e, lbs	4,290,000	2,145	465	3,150,000	1,575	309
All other merchandise, lbs.	89,656,000	44,828	13,820	71,476,000	35,738	10,426
Total merchandise.	....	110,141	$27,374	....	64,943	$14,233
OTHER ARTICLES.						
Live cattle, hogs and sheep, lbs.	....	....	....	6,000	3	$28
Stone, lime and clay, lbs.	551,038,000	275,519	$25,944	401,876,000	200,938	17,149
Gypsum, lbs.	31,106,000	15,503	1,530	33,552,000	16,776	1,603
Mineral coal, lbs.	....	....	....	....	....	....
Anthracite coal, lbs.	2,026,658,000	1,013,329	97,601	1,518,748,000	759,374	75,945
Bituminous coal, lbs.	707,524,000	203,762	43,705	554,648,000	277,324	37,134
Copper ore, lbs.	2,000	1	....	....	....	....
Iron ore, lbs.	566,436,000	283,218	17,608	347,150,000	173,530	12,221
Sundries, lbs.	240,990,000	120,495	40,185	512,460,000	256,230	39,121
Total other articles	....	1,911,827	$226,573	....	1,684,175	$183,201
Total.	....	4,859,858	$1,457,535	....	4,172,129	$1,223,213
Add tolls on boats and passeng'rs	....	....	132,497	....	....	116,791
Total tolls.	....	....	$1,590,032	....	....	$1,340,004

STATEMENT No. 53 — (*Continued*).

ARTICLES.	1877.			1878.		
	Quantity.	Tons.	Tolls.	Quantity.	Tons.	Tolls.
THE FOREST.						
*Fur and peltry, lbs	144,000	72	....	....	4	....
Product of wood.						
Boards and scantling, feet	678,301,200	1,130,502	$196,969	708,100,200	1,180,167	$188,098
Shingles, M.	78,200	9,775	5,700	74,984	9,373	5,427
Timber, cubic feet	1,599,900	31,998	19,117	1,649,440	32,988	19,084
Staves, lbs	96,366,000	48,183	13,539	92,480,000	46,240	13,222
Wood, cords	31,436	88,019	5,990	30,091	84,256	3,604
Ashes, pot and pearl, lbs	14,462	3,977	231	2,120	583	120
*Ashes, leached	....	....	....	350,300	10,509	....
Total of the forest	....	1,312,454	$241,546	....	1,364,120	$229,555
AGRICULTURE.						
Product of animals.						
*Pork, bbls	37,612	6,018	....	17,500	2,805	....
*Beef, bbls	106	17	....	....	....	....
*Bacon, lbs	2,000	1	....	2,000	1	....
Cheese, lbs	214,000	107	$23	796,000	398	$96
Butter, lbs	18,000	9	4	26,000	13	3
*Lard, tallow and lard oil, lbs	10,178,000	5,089	....	612,000	306	....

*Wool, lbs.	726,000	363	....	1,028,000	514	....
Hides, lbs.	1,668,000	834	233	1,490,000	745	159
Total product of animals...	....	12,438	$260	....	4,782	$258
Vegetable food.						
*Flour.	....	....	....	30,129	3,254	....
Flour, lbs.	82,621	8,923	$903	24,537	2,650	$186
Wheat, bush.	14,934,766	448,043	132,944	28,151,866	844,555	270,508
Rye, bush	1,283,857	35,948	10,899	2,307,607	64,613	20,606
Corn, bush.	25,837,786	723,458	243,451	26,249,750	734,993	247,092
*Corn meal, bbls.	3,120	337	....	5,666	612	....
Barley, bush	5,810,542	139,453	31,210	3,730,583	89,534	19,723
Barley malt, bush.	718,800	12,579	3,206	1,031,000	16,496	2,357
Oats, bush	4,127,812	66,045	21,029	5,314,313	85,029	27,122
Bran and ship stuffs, lbs.	4,782,000	2,391	292	5,528,000	2,764	615
Peas and beans, bush.	162,533	4,876	1,058	167,100	5,013	1,143
Apples, bbls.	140,056	9,804	4,120	320,333	24,025	9,166
Potatoes, bush.	1,582,133	47,464	11,259	1,161,066	34,832	8,043
*Dried fruit, lbs.	6,446,000	3,223	....	8,728,000	4,364	....
Total vegetable food.	....	1,502,547	$460,371	....	1,912,734	$606,561
All other agricultural products.						
*Cotton, lbs.	1,810,000	905	....	1,670,000	835	....
*Unmanufactured tobacco, lbs.	180,000	90	....	356,000	178	....
*Hemp, lbs.	1,284,000	642	....	3,032,000	1,516	....
*Clover and grass seed, lbs.	4,438,000	2,219	....	1,176,000	588	....

STATEMENT No. 53 — (*Continued*).

ARTICLES	1877.			1878.		
	Quantity.	Tons.	Tolls.	Quantity.	Tons.	Tolls.
Flax seed, lbs.	6,820,000	3,410	$1,756	1,106,000	553	$6
*Hops, lbs.	138,000	69	....	100,000	50	....
Total all other agricult'l prod'ts	....	7,335	$1,756	....	3,720	$6
Total agricultural products...	....	1,522,317	$462,387	....	1,921,236	$606,025
MANUFACTURES.						
*Domestic spirits, gallons	64,500	258	....	101,500	406	....
Oil meal and cake, lbs.	9,526,000	4,763	$1,111	13,172,000	6,586	$667
*Leather, lbs.	170,000	85	....	342,000	171	....
Furniture, lbs.	748,000	374	674	738,000	369	80
*Bar and pig lead, lbs.	2,722,000	1,361	....	196,000	98	....
Pig iron, lbs	71,984,000	35,992	2,497	90,080,000	45,040	4,147
Bloom and bar iron, lbs	22,088,000	11,014	732	13,330,000	6,665	777
Castings and iron ware, lbs.	7,206,000	3,603	571	6,242,000	3,121	523
*Domestic woolens, lbs.	5,064,000	2,532	....	11,282,000	5,641	....
*Domestic cottons., lbs	5,039,000	2,519	....	24,078,000	12,039	....
Domestic salt, lbs.	232,680,000	116,340	18,528	266,296,000	133,148	20,450
Foreign salt, lbs	10,694,000	5,347	3,182	13,558,000	6,779	6,174
Total manufactures	....	181,218	$27,295	....	220,063	$32,818

MERCHANDISE.						
Sugar, lbs	11,292,000	5,646	$660	68,600,000	34,300	$5,584
Molasses, lbs..................	14,222,000	7,111	644	19,456,000	9,728	883
*Coffee, lbs..................	572,000	286	....	1,064,000	532	....
Nails, spikes and horse-shoes, lbs.	6,106,000	3,053	250	6,060,000	3,030	316
Iron and steel, lbs..............	10,272,000	5,136	475	15,572,000	7,786	894
Railroad iron, lbs...............	20,682,000	10,341	788	16,770,000	8,385	1,002
Flint enam., crock'y & glassw., lbs.	1,870,000	935	151	6,090,000	3,045	464
All other merchandise, lbs......	101,004,000	50,502	11,265	142,516,000	71,258	15,932
Total merchandise...........	....	83,010	$14,233	....	138,064	$25,075
OTHRR ARTICLES.						
*Live cattle, hogs and sheep, lbs.	4,000	2	....	....	....	....
Stone, lime and clay, lbs........	320,566,000	160,283	$9,996	412,660,000	206,330	$11,338
Gypsum, lbs	50,712,000	25,356	1,384	26,702,000	13,351	1,360
Mineral coal, lbs	....	....	....	1,363,474,000	681,737	....
Anthracite coal, lbs............	2,030,478,000	1,015,239	68,336	416,272,000	208,136	32,360
Bituminous coal, lbs...........	515,284,000	257,642	17,168	....	....	17,042
Iron ore, lbs..................	501,146,000	250,573	10,032	420,156,000	210,078	7,825
Petroleum	....	....	....	158,085	27,665	9,062
Sundries, lbs..................	289,594,000	144,797	23,760	361,080,000	180,540	20,088
Total other articles.........	....	1,853,892	$130,646	....	1,527,837	$99,075
Total.	....	4,955,963	$876,107	....	5,171,320	$993,348
Add tolls on boats and passengers	....	....	4,789	....	....	....
Total tolls................	....	....	$880,896	....	....	....

*Articles marked thus were placed on free list in 1877.

STATEMENT No. 53 — (*Continued*).

ARTICLES.	1879			1880.		
	Quantity.	**Tons.**	**Tolls.**	**Quantity.**	**Tons.**	**Tolls.**
THE FOREST.						
*Fur and peltry, lbs	....	....	....	....	....	....
Product of wood.						
Boards and scantling, feet	715,593,600	1,192,656	$211,503	823,768,800	1,372,948	$239,978
Shingles, M.	87,576	10,947	2,077	52,552	6,569	1,173
Timber, cubic feet	2,473,050	49,461	26,706	2,996,400	59,928	16,682
Staves, lbs., paying toll	63,368,000	31,684	7,701	486,000	243	65
†Staves, lbs., on free list	....	....	....	71,838,000	35,919	....
Wood, cords	26,030	72,888	1,188	29,048	81,336	1,250
Ashes, pot and pearl, bbls	378	104	6	884	14	....
*Ashes leached, bushels	370,300	11,109	....	326,900	9,807	....
Total of the forest	....	1,368,849	$249,181	....	1,566,764	$259,448
AGRICULTURE.						
Product of Animals.						
*Pork, bbls	4,050	648	....	38,967	6,235	....
*Beef, bbls	....	....	....	281	45	....
*Bacon, bbls	....	....	....	2,000	1	....

*Cheese, lbs	218,000	109	....	30,000	15	....
*Butter, lbs	14,000	7	....	....	....	....
*Lard, tallow and lard oil, lbs	226,000	113	....	9,418,000	4,709	....
*Wool, lbs	1,024,000	512	....	796,000	398	....
Hides, lbs	504,000	252	$22	420,000	210	$22
Total products of animals	....	1,641	$22	....	11,613	$22
Vegetable food.						
*Flour, bbls	66,333	7,164	....	76,537	8,266	....
Wheat, bush	31,648,866	949,466	$309,934	32,201,733	966,052	$314,220
Rye, bush	2,114,643	59,210	17,436	940,714	26,340	6,750
Corn, bush	22,185,000	621,180	207,750	41,307,821	1,156,619	388,101
*Corn meal, bbls	8,130	878	....	12,620	1,363	....
Barley, bush	4,006,000	96,144	18,411	4,426,958	106,247	19,098
Barley malt, bush	582,706	9,906	2,654	820,824	13,954	2,709
Oats, bush	1,447,750	23,164	6,301	1,305,812	20,893	6,035
Bran and ship stuffs, lbs	5,816,000	2,908	101	3,812,000	1,906	60
Peas and beans, bush	134,466	3,734	854	149,366	4,481	836
Apples, bbls	225,265	15,994	3,997	290,627	21,797	4,185
Potatoes, bush	1,149,666	34,490	4,221	1,281,324	38,440	4,970
*Dried fruit, lbs	18,322,000	9,161	....	9,464,000	4,732	....
Total vegetable food	....	1,833,399	$571,659	....	2,371,090	$746,964
All other agricultural products.						
*Cotton, lbs	1,672,000	836	....	1,070,000	535	....
*Unmanufactured tobacco, lbs	418,000	209	....	284,000	142	....

STATEMENT No. 53 — (*Continued*).

ARTICLES.	1879.			1880.		
	Quantity.	Tons.	Tolls.	Quantity.	Tons.	Tolls.
*Hemp, lbs	1,558,000	779	....	1,190,000	595	....
*Clover and grass seed, lbs	148,000	74	....	2,626,000	1,313	....
*Flax seed, lbs	26,778,000	13,389	....	46,052,000	23,026	....
*Hops, lbs	40,000	20	....	88,000	44	....
Total all other agric'l products	....	15,307	....	....	25,655	....
Total agricultural products	....	1,850,347	$571,681	....	2,408,358	$746,986
MANUFACTURES.						
*Domestic spirits, gallons	73,000	292	....	89,000	356	....
*Oil meal and cake, lbs	8,712,000	4,356	....	3,016,000	1,508	....
*Leather, lbs	384,000	192	....	130,000	65	....
Furniture lbs	710,000	355	$22	444,000	222	$12
*Bar and pig lead, lbs	528,000	264	....	112,000	56	....
Pig iron, lbs	124,180,000	62,090	6,872	210,646,000	105,323	15,186
Bloom and bar iron, lbs	54,006,000	27,003	3,778	23,896,000	11,948	1,000
Castings and iron ware, lbs	1,864,000	932	64	9,976,000	4,988	594
*Domestic woolens, lbs	21,608,000	10,804	....	4,246,000	2,123	....

*Domestic cottons, lbs.	25,988,000	12,994	....	14,076,000	7,038	....
Domestic salt, lbs	265,588,000	132,794	18,168	278,124,000	139,062	17,801
Foreign salt, lbs	6,454,000	3,227	1,803	10,850,000	5,425	2,249
Total manufactures	....	255,303	$30,707	....	278,114	$36,842
MERCHANDISE.						
Sugar, lbs	99,136,000	49,563	$7,860	66,520,000	33,260	$5,432
Molasses, lbs	17,496,000	8,748	1,343	12,834,000	6,417	865
*Coffee, lbs	1,850,000	925	....	1,414,000	707	....
Nails, spikes and horse-shoes, lbs	4,042,000	2,021	140	2,020,000	1,010	57
Iron and steel, lbs	15,044,000	7,522	833	33,448,000	16,724	1,623
Railroad iron, lbs	55,268,000	27,634	3,612	189,226,000	94,613	14,584
Fl't enamel, cr'k'y & gl'ssw're, lbs	6,518,000	3,259	335	5,888,000	2,944	274
All other merchandise, lbs	274,798,000	137,399	16,981	398,980,000	199,490	21,776
Total merchandise	....	237,071	$31,104	....	355,165	$44,611
OTHER ARTICLES.						
*Live cattle, hogs and sheep, lbs.	....	....	....	....	....	....
Stone, lime and clay, lbs	395,792,000	197,896	$9,293	471,028,000	235,514	$12,818
Gypsum, lbs	18,924,000	9,462	1,309	25,090,000	12,545	893
Mineral coal, lbs	....	....	....	....	....	....
Anthracite coal, lbs	1,621,066,000	810,535	16,555	1,515,390,000	757,695	14,102
Bituminous coal, lbs	221,082,000	160,541	5,672	403,294,000	201,647	6,034
Copper ore, lbs	....	....	....	....	....	....
Iron ore, lbs	628,822,000	314,411	12,120	741,768,000	370,884	14,628
*Rock phos. and superphosphates	....	....	....	20,080,000	10,040	....

STATEMENT No. 53 — (*Continued*).

ARTICLES.	1879.			1880.		
	Quantity.	Tons.	Tolls.	Quantity.	Tons.	Tolls.
Petroleum, bbls.	61,205	10,715	$1,665	1,263	221	$4
Sundries, lbs.	294,488,000	147,244	12,287	521,418,000	260,709	19,353
Total other articles	....	1,650,802	$58,901	....	1,849,255	$67,832
Total	....	5,362,372	$941,574	....	6,457,656	$1,155,419

* Articles marked thus were placed on the free list in 1877.

† Placed on free list 1880, for all canals except Black River.

STATEMENT No. 53 — (*Continued*).

ARTICLES.	1881.			1882.		
	Quantity.	Tons.	Tolls.	Quantity.	Tons.	Tolls.
THE FOREST.						
*Fur and peltry, pounds	......	......	......	......	......	......
Product of Wood.						
Boards and scantling, feet	887,512,200	1,479,187	$261,414	942,555,000	1,570,925	$276,807
Shingles, M	47,632	5,954	1,136	58,456	7,307	1,433
Timber, cubic feet	2,770,650	55,413	18,714	3,591,550	71,831	23,038
Staves, pounds, paying toll	......	......	......	......	......	......
†Staves, pounds, on free list	73,992,000	36,996	......	97,853,000	48,929	......
Wood, cords	22,298	62,434	1,102	22,227	62,236	1,051
Ashes, pot and pearl, barrels	1,629	448	......	......	......	......
*Ashes, leached, bushels	403,700	12,111	......	350,500	10,515	......
Total of the forest	......	1,652,543	$282,366	......	1,771,743	$302,329
AGRICULTURE.						
Product of Animals.						
*Pork, barrels	1,219	195	......	700	112	......
*Beef, barrels	......	......	......	44	7	......
†Bacon, barrels	......	......	......	......	......	......
*Cheese, pounds	96,000	48	......	8,000	4	......
*Butter, pounds	......	......	......	......	......	......
*Lard, tallow and lard oil, pounds	6,620,000	3,310	......	3,506,000	1,753	......

STATEMENT No. 53 (*Continued*).

ARTICLES.	1881.			1882.		
	Quantity.	Tons.	Tolls.	Quantity.	Tons.	Tolls.
*Wool, pounds	90,000	45	....	38,000	29	....
Hides, pounds	46,000	23	....	....	....	....
Total product of animals	....	3,621	....	....	1,905	....
Vegetable Food.						
*Flour, barrels	64,129	6,926	....	86,777	9,372	....
Wheat, bushels	14,827,733	444,832	$133,059	21,407,166	642,215	$203,129
Rye, bushels	553,000	15,484	2,853	1,549,000	43,372	11,238
Corn, bushels	16,993,679	475,823	155,011	8,988,821	251,687	79,880
*Corn meal, barrels	13,370	1,444	....	17,370	1,876	....
Barley, bushels	3,399,458	81,587	13,729	4,027,083	96,650	16,256
Barley malt, bushels	887,526	15,088	3,474	846,824	14,396	3,248
Oats, bushels	1,865,063	30,321	5,533	1,386,250	22,180	4,184
Bran and ship stuffs, pounds	6,700,000	3,350	308	8,572,000	4,286	185
Peas and beans, bushels	101,334	3,040	636	206,834	6,205	1,142
Apples, barrels	48,662	3,455	644	29,493	2,212	134
Potatoes, bushels	1,116,867	33,506	3,936	758,367	22,751	2,748
*Dried fruit, pounds	3,410,000	1,705	....	3,148,000	1,574	....
Total vegetable food	....	1,116,561	$323,183	....	1,118,776	$322,144
All other Agricultural Products.						
*Cotton, pounds	86,000	43	....	100,000	50	....
*Unmanufactured tobacco, pounds	192,000	96	....	20,000	10	....
*Hemp, pounds	10,308,000	5,154	....	7,790,000	3,895	....
*Clover and grass seed, pounds	918,000	459	....	454,000	227	....

*Flax seed,pounds	90,926,000	45,463		96,788,000	48,394	
*Hops, pounds	6,000	3				
Total all other agricultural products		51,218			52,576	
Total agricultural products		1,171,400	$323,183		1,173,257	$322,144
MANUFACTURES.						
*Domestic spirits, gallons	92,250	369		16,000	64	
*Oil meal and cake, pounds	4,222,000	2,111		6,288,000	3,144	
*Leather, pounds						
Furniture, pounds	94,000	47	$1	102,000	51	
*Bar and pig lead, pounds	12,000	6				
Pig iron, pounds	94,198,000	47,099	122	93,964,000	46,982	$588
Bloom and bar iron, pounds	148,968,000	74,484	298	50,138,000	25,069	316
Castings and iron ware, pounds	2,526,000	1,263	10	3,394,000	1,697	101
*Domestic woolens, pounds	4,008,000	2,204		556,000	278	
*Domestic cottons, pounds	19,644,000	9,822		4,420,000	2,210	
Domestic salt, pounds	202,542,000	101,271		195,690,000	97,845	
Foreign salt, pounds	24,970,000	12,485		20,390,000	10,195	1
Total manufactures		250,961	$431		187,535	$1,006
MERCHANDISE.						
Sugar, pounds	35,874,000	17,937		13,198,000	6,599	
Molasses, pounds	5,902,000	2,951	$1	8,408,000	4,204	
*Coffee, pounds	2,512.000	1,256		3,486,000	1,743	
Nails, spikes and horse shoes, pounds	3,032.000	1,516	9	3,590,000	1,795	$4
Iron and steel, pounds	161,286,000	80,643	35	98,076,000	49,038	223
Railroad iron, pounds	157,300,000	78,650		117,842,000	58,921	138
Flint enamel, crockery and glassware, pds.	4,704,000	2,352	65	2,110,000	1,055	32
All other merchandise, pounds	280,940,000	140,470	1,650	319,638,000	159,819	1,702
Total merchandise		325,775	$1,760		283,174	$2,099

STATEMENT No. 53 — (*Continued*).

ARTICLES,	1881.			1882.		
	Quantity.	Tons.	Tolls.	Quantity.	Tons.	Tolls.
Other Articles.						
*Live cattle, hogs and sheep, pounds	112,000	56	....	354,000	177	....
Stone, lime and clay, pounds	537,006,000	268,503	$4,220	733,680,000	366,840	$5,441
Gypsum, pounds	10,496,000	5,248	20	9,708,000	4,854	....
Mineral coal, pounds	....	....	....	....	....	....
Anthracite coal, pounds	1,776,512,000	88,256	1,449	2,122,266,000	1,061,133	1,639
Bituminous coal, pounds	407,494,000	203,747	4,959	334,604,000	167,302	5,450
Copper ore, pounds	....	....	....	....	....	....
Iron ore, pounds	675,746,000	337,873	10,620	728,722,000	364,361	11,514
*Rock phosphate and superphosphates, pds.	21,386,000	10,693	....	31,654,000	15,827	....
Petroleum, barrels	2,520	441	11	1,200	210	5
Sundries, pounds	127,392,000	63,696	2,519	142,020,000	71,010	3,262
Total other articles	....	1,778,513	$23,798	....	2,051,714	$27,311
Total	....	5,179,192	$631,538	....	5,467,423	$654,889
Add tolls on yachts and pleasure boats	....	....	852	....	....	937
Total tolls	....	....	$632,390	....	....	$655,826

* Articles marked thus were placed on the free list in 1877.

† Placed on free list in 1880 for all canals except Black River.

(No. 54.)

STATEMENT showing the total tons and value, the tolls paid, and the relative proportion of tons, value and tolls of each class of property transported on all the canals during the year 1882.

CLASS OF PROPERTY	QUANTITY.		VALUE.		TOLLS.	
	Tons.	Rate per cent.	Amount.	Rate per cent.	Amount.	Rate per cent.
Yachts and pleasure boats	....	....	....	....	$937	.14
Products of the forest	1,771,743	32.40	$20,285,512	13.71	302,329	46.09
Agriculture: Product of animals	1,905	.04	480,982	.33	....	....
Vegetable food	1,118,776	20.46	39,273,119	26.55	322,144	49.12
All other agricultural products	52,576	.98	3,012,586	2.04	....	....
Manufactures	187,535	3.43	4,673,440	3.16	1,006	.16
Merchandise	283,174	5.17	61,769 417	41.76	2,099	.32
Other articles	2,051,714	37.52	18,423,851	12.45	27,311	4.17
Total	5,467,423	100.00	$147,918,907	100.00	$655,826	100.00

(No. 55.)

STATEMENT of the tons of property left at New York for the years named, by canal boats which run directly to New York without breaking bulk at West Troy or Albany.

ARTICLES.	1857.	1858.	1859.	1860.	1861.
THE FOREST.					
Fur and peltry	3	20	22	72	20
Product of wood.					
Boards and scantling	29,892	52,841	94,233	84,713	45,373
Shingles	121	254	460	546	118
Timber	2,054	5,798	1,974	765	756
Staves	39,489	25,133	63,312	56,397	51,940
Wood	....	....	560	405	291
Ashes, pot and pearl	3,925	1,645	1,513	2,493	1,073
Total of the forest	75,484	86,691	162,074	145,291	99,571
AGRICULTURE. *Product of animals.*					
Pork	1,104	5,443	5,248	934	1,312
Beef	928	8,859	4,624	1,138	1,920
Bacon	905	1,307	864	95	235
Cheese	1,974	4,730	6,163	5,702	4,707
Butter	638	1,687	1,832	1,383	1,837
Lard, tallow and lard oil	196	1,570	1,669	409	582

Wool	528	851	777	796	674
Hides	324	87	81	....	14
Total product of animals	6,515	24,525	21,258	10,457	11,281
Vegetable food.					
Flour	33,307	68,008	43,383	31,471	50,879
Wheat	107,607	136,551	89,151	456,495	757,920
Rye	2,511	8,095	6,034	4,948	16,456
Corn	75,205	89,490	37,954	245,938	417,214
Corn **meal**	....	22	54	864	65
Barley	4,602	20,999	27,355	18,014	12,658
Barley **malt**	....	....	....	....	....
Oats	23,752	37,762	55,765	51,721	49,288
Bran **and ship stuffs**	6,289	10,958	4,772	3,778	5,213
Peas **and beans**	966	5,895	7,866	7,680	8,514
Apples	....	....	....	....	....
Potatoes	5,980	28,293	32,307	22,629	22,026
Dried fruit	63	158	150	285	655
Total vegetable food	257,282	406,141	304,791	843,823	1,340,888
All other agricultural products.					
Cotton	24	133	37	13	1
Unmanufactured tobacco	316	454	1,480	87	1,056
Hemp	63	128	80	38	35
Clover and grass seed	107	1,094	129	3	30
Flax seed	225	142	39	67	77

STATEMENT No. 55—(*Continued.*)

ARTICLES.	1857.	1858.	1859.	1860.	1861.
Hops	214	697	507	520	122
Total all other agricultural products	949	2,648	2,272	728	1,321
Total agricultural products	264,826	433,314	328,321	855,008	1,353,490
MANUFACTURES.					
Domestic spirits	5,214	7,267	4,405	4,155	6,120
Oil meal and cake	5,685	7,855	3,620	527	5,106
Leather	1,814	4,176	4,845	4,448	2,660
Furniture	521	445	543	576	258
Bar and pig lead	51	779	2,169	2,099	3,538
Pig iron	191	1,506	26	145	52
Bloom and bar iron	128	888	1,163	921	350
Castings and iron ware	295	237	286	458	267
Domestic woolens	173	101	6	71	33
Domestic cottons	294	535	377	355	63
Domestic salt	142	200	1,031	1,039	29
Foreign salt	5	....	....	....	....
Total manufactures	14,207	23,989	18,471	13,794	18,476
MERCHANDISE.					
Sugar	4	7	9	8	7
Molasses	....	7	1	2	78
Coffee	1	2	5	....	....

Nails, spikes and horseshoes	7	637	1,023	1,292	1,179
Iron and steel	19	1,095	1,174	1,042	186
Railroad iron	....	522	6	....	25
Flint enamel, crockery and glass ware	25	51	175	368	179
All other merchandise	6,566	5,394	4,177	2,090	798
Total merchandise	6,622	7,709	6,570	4,802	2,452
OTHER ARTICLES.					
Live cattle, hogs and sheep	1	1	1	....	....
Stone, lime and clay	1,323	21,721	25,561	23,989	18,044
Gypsum	5	49	....	....	....
Mineral coal	252	1,261	19,869	11,685	3,484
Anthracite coal	....	....	....	....	....
Bituminous coal	....	....	....	....	....
Copper ore	1,001	2,369	2,187	2,625	2,578
Iron ore	....	....	....	....	....
Sundries	17,669	21,525	45,621	36,848	33,434
Total other articles	20,251	46,926	93,239	75,147	57,544
Total	381,390	598,629	608,675	1,094,042	1,531,529

STATEMENT No. 55—(*Continued*).

ARTICLES.	1862.	1863	1864.	1865.	1866.	1867.	1868.	1869.
THE FOREST.								
Fur and peltry	21	....	....	....	....	....	....	....
Product of wood.								
Boards and scantling	59,762	77,037	136,611	80,439	147,899	129,370	136,072	160,346
Shingles	511	403	315	295	302	243	141	239
Timber	15,813	26,861	....	....	....	....	....	....
Staves	59,474	68,755	98,843	93,824	118,208	114,454	133,478	76,713
Wood	3	440	1,162	280	....	....	....	1,960
Ashes, pot and pearl	692	832	467	577	7,672	605	412	110
Total of the forest	136,276	174,328	232,298	175,415	274,081	244,672	270,103	239,368
AGRICULTURE.								
Product of animals.								
Pork	14,303	33,756	8,512	2,368	....	128	....	....
Beef	8,926	13,075	11,856	1,328	352	176	304	....
Bacon	1,562	1,656	290	618	5	17	....	....
Cheese	5,996	4,357	2,160	8,123	5,708	4,131	3,782	3,317
Butter	2,754	2,388	695	530	780	285	173	133
Lard, tallow and lard oil	3,476	8,609	1,197	948	54	610	383	82
Wool	120	162	411	193	220	139	84	64
Hides	630	59	397	105	8	24	27	5
Total product of animals	37,767	64,062	25,518	14,213	7,127	5,510	4,753	3,601

Vegetable food.								
Flour	80,294	100,749	54,259	48,913	27,540	24,753	27,216	46,159
Wheat	713,084	595,398	397,020	250,859	172,092	244,122	303,090	536,835
Rye	14,250	9,754	12,961	25,541	40,144	23,027	17,981	8,733
Corn	447,356	456,158	166,074	394,203	636,815	367,838	401,717	173,972
Corn meal	713	2,567	961	324	864	442	475	400
Barley	24,721	49,043	37,555	61,255	135,434	53,791	51,079	58,070
Barley malt	1,950	6,350	29,493	8,498	7,713	4,729	7,415	4,422
Oats	57,779	157,266	165,769	135,061	139,734	116,763	147,776	73,814
Bran and ship stuffs	3,837	8,708	4,677	6,599	2,072	2,450	5,201	8,052
Peas and beans	4,006	9,487	9,942	6,891	15,654	22,383	10,185	3,564
Apples	10,212	40,064	14,182	27,420	12,338	24,502	21,240	26,940
Potatoes	28,487	26,615	23,106	28,113	40,641	33,918	33,441	30,957
Dried fruit	206	356	196	78	68	64	29	44
Total vegetable food	1,386,895	1,471,335	916,195	993,735	1,236,109	918,782	1,026,645	971,962
All other Agricultural Products.								
Cotton	2	....	....	9	9	66	12	11
Unmanufactured tobacco	398	151	283	568	167	224	106	70
Hemp	37	21	29	52	....	8	....	23
Clover and grass seed	136	514	229	95	276	255	341	....
Flax seed	458	2,092	2,185	2,558	591	3,425	1,525	234
Hops	102	58	109	79	91	42	52	102
Total all other agri'l products	1,133	2,836	2,835	3,361	1,134	4,020	2,036	440
Total agricultural products	1,425,795	1,538,233	944,548	1,011,309	1,244,370	928,312	1,033,434	976,003

STATEMENT No. 55—(*Continued*).

ARTICLES.	1862.	1863.	1864.	1865.	1866.	1867.	1868.	1869.
MANUFACTURES.								
Domestic spirits	4,613	2,684	6,155	1,369	496	148	6	5
Oil meal and cake	3,914	3,980	4,661	4,591	1,864	2,074	2,462	1,837
Leather	1,738	2,332	2,466	3,325	3,641	4,516	4,733	1,974
Furniture	129	180	141	212	180	183	172	145
Bar and pig lead	2,448	3,322	965	977	17	488	....	18
Pig iron	167	1,707	641	2,196	2,179	3,220	1,745	1,794
Bloom and bar iron	1,007	1,157	1,896	322	1,509	1,440	534	211
Castings and iron ware	170	47	321	94	171	148	85	174
Domestic woolens	61	3	12	8	111	203	161	270
Domestic cottons	100	2	21	117	116	127	156	136
Domestic salt	331	2,381	22,143	13,700	28,415	35,937	43,089	52,779
Foreign salt	....	....	....	....	....	....	....	....
Total	14,678	21,385	39,422	26,911	38,699	48,484	53,143	59,343
MERCHANDISE.								
Sugar	1	102	2	3	10	3	....	3
Molasses	1	3	51	5	439	1	30	2
Coffee	....	....	3	1	14	....	....	1
Nails, spikes and horse shoes	499	446	84	164	847	403	152	52
Iron and steel	576	776	47	7	335	497	167	392
Railroad iron	1	....	....	....	4	24	....	....
Flint enamel, c'kry & glassware	134	51	137	81	155	68	303	380

All other merchandise.......	1,163	1,621	858	1,209	2,332	2,618	2,589	2,371
Total merchandise........	2,325	2,999	1,132	1,470	4,136	3,614	3,246	3,201
OTHER ARTICLES.								
Live cattle, hogs and sheep..	....	....	....	....	....	....	....	....
Stone, lime and clay........	9,243	12,980	16,451	21,365	28,241	33,811	41,952	38,285
Gypsum	....	160	1	....	....	1	12	1
Mineral coal...............	....	....	....	....	....	....	....	....
Anthracite coal............	165	....	....	200	....	....	....	....
Bituminous coal............	3,384	11,341	515	300	6,028	5,787	2,293	3,741
Copper ore................	2,677	2,717	1,329	1,343	1,819	1,991	425	....
Iron ore..................	1,203	1,552	3,467	225	3,981	6,720	5,196	2,625
Sundries	13,215	25,968	21,684	27,860	31,817	53,274	56,373	58,947
Total other articles.......	29,977	54,718	43,447	51,293	71,886	101,584	106,251	103,599
Total.................	1,609,051	1,791,663	1,260,847	1,266,398	1,633,172	1,326,666	1,466,177	1,381,514

STATEMENT No. 55 — (*Continued*).

ARTICLES.	1870.	1871.	1872.	1873.	1874.
THE FOREST.					
Fur and peltry	....	....	....	....	....
Product of wood.					
Boards and scantling	209,438	176,290	230,943	174,550	136,700
Shingles	177	172	217	94	319
Timber	304	....	436	388	....
Staves	105,615	66,471	93,512	99,906	79,411
Wood	2,800	2,240	560	840	636
Ashes, pot and pearl	110	193	27	....	124
Total of the forest	318,444	245,346	325,695	275,778	217,190
AGRICULTURE. *Product of animals.*					
Pork	....	128	....	....	11
Beef	176	224	176	....	....
Bacon	....	....	....	....	....
Cheese	4,359	2,630	1,499	1,109	1,455
Butter	139	56	31	10	16
Lard, tallow and lard oil	4	51	78	59	3
Wool	121	24	4	1	9
Hides	15	13	....	....	....
Total product of animals	4,814	3,126	1,788	1,179	1,494

Vegetable food.					
Flour	41,644	25,423	11,793	7,992	14,491
Wheat	502,437	620,307	328,128	658,863	691,515
Rye	13,776	28,582	12,748	25,122	10,058
Corn	121,875	535,511	816,914	495,737	472,550
Corn meal	43	....	22	....	23
Barley	81,216	56,458	72,415	35,251	41,866
Barley malt	12,314	9,092	15,890	12,349	7,237
Oats	80,438	93,523	78,093	42,752	55,517
Bran and ship stuffs	5,375	3,077	3,642	4,562	1,837
Peas and beans	6,597	3,264	3,120	3,912	7,080
Apples	43,665	33,653	28,320	24,600	33,637
Potatoes	22,170	36,792	39,489	30,624	52,209
Dried fruit	12	52	92	46	....
Total vegetable food	931,562	1,445,734	1,410,666	1,341,810	1,388,020
All other agricultural products.					
Cotton	15	10	....	7	7
Unmanufactured tobacco	63	56	....	29	42
Hemp	....	....	31	25	....
Clover and grass seed	1	48	....	....	2
Flax seed	11	899	58	40	167
Hops	32	41	9	4	23
Total all other agricultural products	122	1,054	98	105	241
Total agricultural products	936,498	1,449,914	1,412,552	1,343,094	1,389,755

STATEMENT No. 55—(*Continued*).

ARTICLES.	1870.	1871.	1872.	1873.	1874.
MANUFACTURES.					
Domestic spirits	20	14	7	50	....
Oil meal and cake	1,213	1,667	1,692	1,964	2,267
Leather	1,387	904	368	134	129
Furniture	142	163	125	51	42
Bar and pig lead	1	....	....	....	698
Pig iron	3,298	3,718	2,025	2,443	1,228
Bloom and bar iron	326	294	2,649	557	478
Castings and iron ware	165	189	84	32	152
Domestic woolens	118	34	9	19	66
Domestic cottons	110	478	76	21	28
Domestic salt	56,707	62,602	41,774	26,994	12,602
Foreign salt	....	....	....	....	....
Total	63,487	70,063	48,809	32,265	17,690
MERCHANDISE.					
Sugar	2	2	....	....	....
Molasses	19	158	....	13	23
Coffee	....	....	....	....	....
Nails, spikes and horseshoes	102	14	199	281	316
Iron and steel	1,166	1,208	384	2,567	1,532
Railroad iron	....	1	....	....	159

Flint enamel, crockery and glassware	96	16	122	....	181
All other merchandise	2,451	1,251	3,038	4,287	3,053
Total merchandise	3,836	2,650	3,743	7,148	5,264
OTHER ARTICLES.					
Live cattle, hogs and sheep	....	....	....	22	....
Stone, lime and clay	32,876	40,613	43,429	32,385	28,681
Gypsum	9	....	....	....	80
Mineral coal	....	....	....	....	....
Anthracite coal	8,122	....	....	....	1,520
Bituminous coal	....	8,440	3,000	8,768	10,611
Copper ore	7,257	....	....	....	....
Iron ore	....	14,214	26,664	13,703	9,191
Sundries	41,969	67,780	52,611	27,465	29,834
Total other articles	90,233	131,047	125,704	82,343	79,917
Total	1,412,498	1,899,020	1,916,503	1,740,628	1,709,816

STATEMENT No. 55 — (*Continued*).

ARTICLES.	1875.	1876.	1877.	1878.	1879.	1880.
THE FOREST.						
*Fur and peltry	....	....	....	....	....	....
Product of wood.						
Boards and scantling	167,427	192,030	222,221	346,048	346,227	390,117
Shingles	513	202	6	2,363	9	90
Timber	....	....	....	....	....	....
Staves	32,313	23,596	35,217	32,350	18,183	14,988
Wood	1,400	28	358	....	84	....
Ashes pot and pearl	5	....	....	....	....	....
*Ashes, leached	....	....	....	9,959	....	10,056
Total of the forest	201,658	215,856	257,802	390,720	364,503	415,251
AGRICULTURE. *Product of Animals.*						
*Pork	....	....	210	2,472	336	5,488
*Beef	....	....	....	....	....	16
*Bacon	....	....	....	....	....	....
*Cheese	1,179	343	81	252	51	....
*Butter	14	65	3	13	9	....
*Lard, tallow and lard oil	....	60	4,363	163	8	4,323

*Wool	....	....	....	110	1	....
Hides	27	....	....	....	....	....
Total product of animals	1,222	468	4,657	3,010	405	9,827
Vegetable food.						
*Flour	9,018	2,840	2,656	1,166	248	1,750
Wheat	634,176	351,618	380,391	810,011	912,783	872,634
Rye	6,151	5,594	32,861	60,576	51,733	24,660
Corn	229,272	317,002	650,781	711,962	565,995	971,386
*Corn meal	108	....	....	....	....	....
Barley	68,016	67,696	111,745	55,738	58,634	58,366
Barley malt	9,749	22,185	9,487	13,181	8,714	11,310
Oats	48,496	48,572	69,376	81,331	19,698	15,832
Bran and ship stuffs	429	333	120	20	....	....
Peas and beans	4,473	3,867	4,890	4,909	3,144	3,320
Apples	22,863	21,540	6,923	21,277	13,944	16,080
Potatoes	52,935	28,008	41,886	33,028	29,088	30,306
*Dried fruit	39	....	3	17	....	....
Total vegetable food	1,085,725	869,255	1,311,119	1,793,216	1,663,981	2,005,644
All other agricultural products.						
*Cotton	6	20	....	309	1	....
*Unmanufactured tobacco	43	38	....	....	1	....
*Hemp	2	....	....	....	106	....
*Clover and grass seed	304	....	1,231	40	1	257

STATEMENT No. 55 — (*Continued*).

ARTICLES.	1875.	1876.	1877.	1878.	1879.	1880.
*Flax seed	....	....	906	....	11,988	18,432
*Hops	22	....	50	46	15	39
Total all other agricult'l products	377	58	2,187	395	12,112	18,728
Total agricultural products	1,087,324	869,781	1,317,963	1,796,621	1,676,498	2,034,199
MANUFACTURES.						
*Domestic spirits	....	....	7	10	1	....
*Oil meal and cake	1,220	2,030	3,199	4,818	3,619	1,607
*Leather	120	57	4	64	48	....
Furniture	440	13	32	5	5	....
*Bar and pig lead	....	....	716	....	87	....
Pig iron	3,361	2,911	1,673	1,200	2,871	824
Bloom and bar iron	962	288	417	1,681	1,611	914
Castings and iron ware	264	....	272	....	6	218
*Domestic woolens	31	1	....	....	19	....
*Domestic cottons	214	....	....	....	12	....
Domestic salt	27,400	12,019	16,374	17,968	17,967	21,244
Foreign salt	....	....	....	....	....	....
Total manufactures	34,012	17,319	22,694	25,746	26,246	24,807

MERCHANDISE.						
Sugar	....	....	....	....	28	....
Molasses	14	....	2	....	40	....
*Coffee	1	....	....	....	....	....
Nails, spikes and horse shoes	25	....	43	....	97	....
Iron and steel	160	814	54	353	6	....
Railroad iron	....	209	....	1,792	4,722	....
Flint enamel crockery and glassware	115	30	10	....	52	....
All other merchandise	1,836	816	1,295	94	1,139	534
Total merchandise	2,151	1,869	1,404	2,239	6,084	534
OTHER ARTICLES.						
*Phosphates	....	....	....	....	....	150
Stone, lime and clay	33,580	....	23,646	71,550	42,304	34,464
Gypsum	258	130,815	240	217	....	....
Mineral coal	....	....	....	....	....	....
Anthracite coal	....	2,539	....	....	22	....
Bituminous coal	3,750	....	3,560	5,952	4,624	3,961
Copper ore	123	....	....	....	....	....
Iron ore	13,103	21,471	11,172	37,393	88,575	127,885
Petroleum	....	....	....	26,296	6,667	....
Sundries	31,265	123,128	23,998	29,275	12,167	179,913
Total other articles	82,079	177,953	62,616	170,683	154,348	346,373
Total	1,407,224	1,282,778	662,479	2,386,009	2,227,679	2,821,164

*Articles marked thus were placed on the free list in 1877.

Office at New York abolished in 1881.

(No. 56.)

STATEMENT of foreign exports of flour and grain from New York, from 1861 *to* 1882.

YEARS.	Barrels wheat flour.	Barrels rye flour.	Barrels corn meal.	Bushels wheat.	Bushels corn.	Bushels oats.
1861	3,110,646	11,807	108,385	28,889,914	12,456,265	160,875
1862	2,961,518	8,397	132,606	25,564,755	12,020,848	210,669
1863	2,527,338	5,461	140,561	15,424,889	7,533,431	126,566
1864	1,918,393	2,840	105,142	12,193,433	846,831	42,135
1865	1,402,144	2,673	127,600	2,527,626	2,549,670	94,567
1866	900,084	7,552	149,773	522,669	11,079,394	1,190,583
1867	871,089	11,754	151,669	4,468,774	8,147,813	144,665
1868	1,003,968	7,459	191,011	5,762,037	5,989,225	94,707
1869	1,584,211	5,283	137,627	18,240,586	1,637,586	49,393
1870	1,950,234	....	....	18,446,035	487,792	28,986
1871	1,660,400	4,200	123,500	21,968,600	13,046,600	47,300
1872	1,216,082	6,399	194,040	13,144,400	25,292,200	31,739
1873	1,655,331	8,249	176,756	27,801,800	15,587,500	49,700
1874	2,177,608	8,473	168,603	34,791,249	19,000,995	122,528
1875	1,954,100	5,700	173,400	26,192,700	12,938,700	138,800
1876	1,887,441	5,778	172,042	24,144,033	16,610,232	620,536
1877	1,537,106	7,999	220,939	21,355,774	25,373,942	257,634
1878	2,630,437	4,375	202,788	55,019,389	27,440,771	3,658,905
1879	3,684,366	6,049	150,178	61,538,861	35,319,789	521,406
1880	4,215,415	5,204	203,716	61,908,029	49,875,430	427,959
1881	4,440,114	3,264	196,985	41,798,182	31,731,995	431,426
1882	4,623,956	....	112,316	37,620,103	9,012,373	170,586

STATEMENT No. 56 — (*Continued*).

YEARS.	Bushels barley.	Bushels rye.	Bushels peas and beans.	Bushels malt.	Aggregate in tons.
1861	3,927	1,000,405	139,284	....	1,599,261
1862	42,061	1,104,549	113,819	....	1,477,321
1863	52,439	416,369	110,911	....	980,675
1864	150	588	186,154	....	614,642
1865	....	198,348	88,899	....	322,454
1866	1,329,842	248,646	282,992	....	506,520
1867	886,893	473,260	680,763	....	531,204
1868	90	152,993	189,226	....	481,902
1869	....	142,542	123,156	....	788,075
1870	....	92,431	151,102	....	785,249
1871	98,700	525,800	90,900	....	1,238,053
1872	22,066	668,030	156,609	....	1,378,412
1873	19,400	1,069,100	143,500	....	1,504,771
1874	3,560	641,661	463,193	....	1,863,297
1875	1,500	206,900	364,900	....	1,405,544
1876	88,097	1,336,283	716,423	....	1,483,402
1877	2,412,509	2,049,796	487,031	....	1,675,902
1878	1,518,922	4,048,841	476,184	....	2,949,042
1879	147,867	3,941,638	393,153	....	3,383,953
1880	254,833	2,181,183	651,669	....	3,825,168
1881	15,477	1,068,928	218,370	....	2,687,356
1882	6,616	1,980,586	572,567	....	1,967,989

(No. 57.)

STATEMENT of total movement of flour, meal and grain on all the canals, from 1861 *to* 1882.

YEARS.	Barrels wheat flour.	Barrels rye flour.	Barrels corn meal.	Bushels wheat.	Bushels corn.	Bushels oats.
1861	1,667,416	....	2,176	33,171,900	25,024,643	6,105,313
1862	2,102,574	....	18,416	37,579,967	27,225,643	6,550,187
1863	1,930,731	....	44,704	26,577,166	22,287,036	16,040,937
1864	1,474,582	....	51,305	19,932,067	11,086,536	15,122,937
1865	1,271,129	....	24,018	14,433,566	20,689,500	11,973,939
1866	751,870	....	17,972	10,989,800	28,904,143	12,138,250
1867	569,334	....	12,808	13,630,300	17,930,500	10,476,000
1868	575,900	....	14,861	14,425,567	18,437,100	11,927,250
1869	657,870	....	12,666	22,351,133	9,159,643	5,769,312
1870	509,055	....	12,250	21,950,800	6,893,893	7,371,312
1871	381,583	....	6,611	23,951,633	24,002,035	8,118,187
1872	190,129	....	6,046	13,463,433	32,241,179	5,809,938
1873	181,731	....	9,342	26,768,800	22,760,571	4,376,437
1874	269,759	....	8,314	25,738,766	18,542,964	3,713,000
1875	163,287	....	3,000	24,809,766	10,072,536	3,919,813
1876	86,019	....	232	13,879,200	13,044,786	3,259,188
1877	82,621	....	3,120	14,934.766	25,837,786	4,127,812
1878	54,666	....	5,666	28,151,866	26,249,750	5,314,313
1879	66,333	....	8,130	31,648,866	22,185,000	1,447,750
1880	76,537	....	12,620	32,201,733	41,307,821	1,305,812
1881	64,129	....	13,370	14,827,733	16,993,679	1,895,063
1882	86,777	....	17,370	21,407,166	8,988,821	1,386,250

TABLE No. 57 — (*Continued*).

YEARS.	Bushels barley.	Bushels rye.	Bushels peas and beans.	Bushels malt.	Aggregate in tons.
1861	2,444,083	976,000	347,233	....	2,070,251
1862	2,764,916	967,750	375,433	280,182	2,332.928
1863	3,816,458	592,571	530,700	366,242	2.021,505
1864	3,232,292	670,168	550,000	565,294	1,437,598
1865	5,336,416	1,220,714	401,533	725,151	1,530,037
1866	7,867,041	1,751,928	536,667	298,212	1,680,169
1867	4,972,250	1,044,643	827,133	479,818	1,322,774
1868	3,698,083	873,357	391,667	257,029	1,350,090
1869	4,125,500	481,750	379,233	330,400	1,221,397
1870	5,132,958	697,143	226,123	698,686	1,189,267
1871	4,749,662	1,234,392	162,700	801,371	1,759,882
1872	5,002,543	477,036	146,600	1,578,914	1,586,249
1873	2,941,083	1,077,143	393,300	1,182,466	1,660,981
1874	4,110,584	293,393	200,566	453,200	1,500,490
1875	4,353,125	296,750	195,200	71,287	1,238,115
1876	4,020,584	712,464	174,200	1,510,629	991,197
1877	5,810,542	1,283,857	162,533	718,800	1,439,662
1878	3,730,583	2,307,607	167,100	1,031,000	1,846,749
1879	4,006,000	2,114,643	124,466	582,706	1,770,846
1880	4,426,958	940,714	149,369	820,824	2,304,215
1881	3,399,458	553,000	101,334	887,526	1,074.545
1882	4,027,083	1,549,000	206,834	846,824	1,087,953

(No. 58.)

STATEMENT of flour, meal and grain received at tide-water by canal, from 1861 *to* 1882.

YEARS.	Barrels wheat flour.	Barrels rye flour.	Barrels corn meal.	Bushels wheat.	Bushels corn.	Bushels oats.
1861	1,530,775	....	3,342	29,632,400	22,344,179	5,991,438
1862	1,826,509	....	10,935	32,667,866	23,709,822	5,929,249
1863	1,628,982	....	30,009	22,350,533	19,974,643	12,567,500
1864	1,197,971	....	13,444	15,916,733	9,412,714	13,730,124
1865	989,764	....	16,074	10,458,333	18,060,607	11,006,375
1866	570,704	....	10,158	7,584,166	26,516,535	11,220,624
1867	450,050	....	4,120	9,466,100	15,405,750	8,841,000
1868	448,361	....	4,398	11,414,366	16,343,107	11,243,376
1869	552,611	....	3,148	18,718,933	7,048,964	5,377,553
1870	453,370	....	5,268	17,557,333	4,904,358	6,327,500
1871	288,250	....	4,898	21,577,299	20,127,965	6,833,625
1872	145,431	....	202	11,373,666	29,914,321	5,684,625
1873	100,027	....	....	22,400,799	18,598,749	3,428,563
1874	177,500	....	213	23,734,299	17,592,610	4,711,374
1875	102,064	....	1,000	22,522,866	8,415,903	3,186,688
1876	36,240	....	....	11,792,299	11,371,071	3,148,062
1877	28,602	....	....	12,732,766	23,549,626	4,060,687
1878	13,157	....	....	27,016,233	25,489,750	5,156,875
1879	3,741	....	704	30,473,833	20,339,428	1,247,312
1880	20,018	....	1,435	29,369,500	34,908,464	1,001,937
1881	3,963	....	....	13,939,767	18,706,999	1,830,938
1882	1,969	....	....	19,446,652	7,284,673	1,306,371

STATEMENT No. 58 — (*Continued*).

YEARS.	Bushels barley.	Bushels rye.	Bushels peas and beans.	Bushels malt.	Aggregate in tons.
1861	2,046,667	805,536	378,366	....	1,859,182
1862	2,562,659	700,215	243,999	186,844	2,026,208
1863	3,263,792	442,858	395,299	441,879	1,719,968
1864	3,166,209	647,214	380,300	1,840,764	1,228.394
1865	4,523,583	1,113,643	267,999	653,472	1,271,076
1866	7,449,833	1,749,535	523,299	329,639	1,460,724
1867	3,866,041	890,286	762,133	816,857	1,060,724
1868	3,386,791	804,000	341,366	479,252	1,151,371
1869	3,577,666	376,107	119,100	319,886	1,010,628
1870	4,618,208	638,071	330.066	848,914	964,976
1871	3,677,208	1,068,643	109,533	753,943	1,486,555
1872	4,478,289	476,431	104,900	1,103,714	1,428.777
1873	2,245,083	934,822	130,600	821,429	1,356,809
1874	2,927,833	850,679	237,000	521,714	1,370.291
1875	3,802,958	230,607	159,466	698,686	1,087,889
1876	3,761,208	681,964	128,900	750,514	852.807
1877	5,589,833	1,247,035	169,600	603,714	1,294,576
1878	3,420,375	2,285,036	164,600	874.813	1,773,137
1879	3,291,249	2,078,857	104,900	540,118	1,653,683
1880	4,014,625	900,214	110,666	678,588	2,013,453
1881	3,019,625	576,821	94,367	794,588	1,076,673
1882	3,273,958	1,520,825	191,997	755,508	948,246

INDEX.

PAGE.
Report 5
Canal and railroad tonnage 9
Cost of transportation from 1861 to 1882 10–33
Other tables showing the cost of transportation on the canals 34–40
Movements of trade by canals and railways 41–51
Series of tables showing the movements of trade on the canals, tons, value and tolls 52–54
Tons of wheat and flour shipped at Buffalo, Black Rock, Tonawanda and Oswego, for a series of years 55, 56
Table showing tendency of lockages 57, 58
Table showing the trade of this State and the western States 59–61
Tonnage and capacity of boats built and registered since 1843 62
Average tonnage of boats; time necessary to make passage, and cost of transporting barrel of flour from Buffalo to Albany 63
Conclusion 64

TABLES.

A to F. Sundry tables showing the tons of property going east and west on the canals during 1882, designating between way and through freight 66–101
No.
1. A general statement of the tolls collected at each collector's office, and on each canal, showing the condition of each collector's account 102, 103
2. A general statement of the tons of each article shipped at each office on the several canals 104–110
3. A general statement of the value of each article shipped at each office on the canals 111–117
4. A general statement of the tolls paid on each article at each office on the several canals 118–120
5. A summary statement of Nos. 2, 3 and 4, with the total movement or number of tons carried one mile 121–124
6. A general statement of the quantity, tons and value of each article which came to the Hudson river from the Erie and Champlain canals 125 127
7. A statement showing the tons going from tide-water by canal, and the tons of merchandise left on each canal 127
8. A statement showing the quantity and tons of each article from other States, by way of Buffalo, Tonawanda, Oswego, Rome and Whitehall 128–130
9. A statement of merchandise, furniture and salt going to western States, by way of Buffalo and Oswego, and to Vermont and Canada, by way of Whitehall 131
10. Tolls at each office for a series of years 132–141
11. Tons and value of each article composing total movement for a series of years 142–167

PAGE.
12. Tolls on each article composing total movement for a series of years.. 168–179
13. Tons and value of each article which came to the Hudson river from the canals for a series of years........................ 180–211
14. Tons going from tide-water for a series of years............... 212, 213
15. Tons from other States for a series of years.................... 214–217
16. Tons of total movement for a series of years.................. 218, 219
17. Value of total movement for a series of years.................. 220, 221
18. Tolls on total movement for a series of years.................. 222, 223
19. Tons from Erie canal for a series of years..................... 224, 225
20. Tons from Champlain canal for a series of years................ 226, 227
21. Tons from Erie and Champlain canals for a series of years...... 228, 229
22. Tolls paid on each canal for a series of years................. 230–233
23. Tons of merchandise going to other States, by way of Buffalo, for a series of years.. 234–236
24. Tons arriving at tide water on the Erie canal, product of this State, for a series of years.................................. 237
25. Tons arriving at tide-water on the Erie canal, product of other States, for a series of years.................................. 238
26. Quantity of wheat and flour shipped at Buffalo, Black Rock, Tonawanda, Oswego and Whitehall, and the total quantity of wheat and flour arriving at the Hudson river for a series of years.. 239, 240
27. A statement of miles run by all boats on all canals for a series of years.. 241
28. Tons of general movement, and showing the tons of the internal trade or movement for a series of years..................... 242, 243
29. Tons of general and internal movement of "The Forest" for a series of years.. 244, 245
30. Tons of general and internal movement of "Agriculture" for a series of years.. 246, 247
31. Tons of general and internal movement of "Manufactures" for a series of years.. 248, 249
32. Tons of general and internal movement of "Merchandise" for a series of years.. 250, 251
33. Tons of general and internal movement of "Other Articles" for a series of years.. 252, 253
34. A statement showing the number of cargoes and light boats weighed at each weigh-lock in 1881, the number of cargoes to which additions were made, the pounds of addition, and the average weight of cargoes at each weigh-lock................ 254, 255
35. A statement showing the number of cargoes, light boats, etc., weighed from 1870 to 1882, both inclusive.................... 256, 257
36. A statement showing the lockages at points on each canal for the year 1882.. 258
37. A statement showing the lockages at points on each canal for 1881 and 1882.. 259
38. A statement showing the lockages at various points for a series of years.. 260, 261
39. A statement of the number of cribs passing Alexander's lock for a series of years.. 262–264
40. A statement showing the lockages at Alexander's lock for a series of years, and date of the commencement and close of navigation in each year... 265–273
41. A statement showing for a series of years the tolls on all canals, the number of boats arriving at and clearing from tide-water, the lockages at Alexander's lock, and the tonnage arriving at tide-water.. 274, 275

PAGE.
42. A statement of the tons of each kind of merchandise going to other States, by way of Buffalo and Oswego, the tons left in this State, and the tons going from tide-water, by way of Erie canal, 1882.. 276
43. A statement of the tons and value of merchandise going to other States, by way of Buffalo and Oswego, for a series of years... 277
44. A statement of the estimated value of property coming from, and merchandise going to other States, by way of Buffalo, Black Rock, Tonawanda and Oswego, for a series of years 278
45. A statement of the estimated value of all property transported on each canal for a series of years.......................... 279–285
46. A statement of the number of clearances issued at each office for a series of years.. 286–297
47. A statement of the number of clearances issued on each canal for a series of years.. 298–301
48. A statement of the tons of property which moved on each and all of the canals for a series of years.......................... 302–305
49. Weekly receipts of tolls for a series of years.................... 306–317
50. Rates of toll established for 1882.............................. 318–321
51. A statement of the number, class and tonnage of boats registered in 1882.. 321
52. A statement showing tonnage of boats registered in each year since 1844.. 322–329
53. A statement of the quantity and tons of, and tolls paid on each article on all the canals for a series of years................. 330–374
54. A statement of the tons, value of, tolls paid, and rate per cent on each class of property transported on the canals in 1882...... 375
55. A statement of the tons of property left at New York, for a series of years, which run directly without breaking bulk at Troy or Albany.. 376–391
56. A statement of the foreign exports of flour, meal and grain from New York, from 1861 to 1882................................... 392, 393
57. A statement of the total movement of flour, meal and grain on all the canals, from 1861 to 1882.............................. 394, 395
58. A statement of flour, meal and grain received at tide-water by canal, from 1861 to 1882...................................... 396, 397

FORTY-SECOND ANNUAL REPORT

OF THE

NEW YORK STATE AGRICULTURAL SOCIETY,

FOR THE YEAR 1882.

ALBANY:
WEED, PARSONS AND COMPANY, PRINTERS.
1883.

CONTENTS.

PAGE.

Officers for 1883 4
Report of the executive committee 7
Treasurer's report 12
President's address 13
Experimental observations on the potato, by E. Lewis Sturtevant, M. D. 16
Poultry as a farm product, by I. K. Felch 20
Silos and ensilage, by Henry E. Alvord 26
An indictment of some of our farm implements, by James L. Ingalsbe 37
The need of a better seed supply, by E. Lewis Sturtevant, M. D 42
Analyses of fertilizers in 1882 46
Explanations of fertilizers-analysis and valuations, by Prof. S. W. Johnson 49
Table of analyses made for the society during the year 1882 53
Table showing fluctuations in the wholesale prices of nitrogen and potash 55
Awards at the Utica fair, 1882 56
Extracts from reports of county societies 101
  Jefferson county, butter and cheese makers' statements 101
  Orange county, prodnct of milk on two farms 102
County Societies, etc., abstracts of treasurers' reports 104
Bulletins issued, No. 4, May, 1882 107
  " No. 5, July, 1882 111
  " No. 6, November, 1882 123
Meteorological tables 140–141
Table of prices of hops 142

OFFICERS FOR 1883.

PRESIDENT,

GEORGE F. MILLS,	Montgomery.

VICE-PRESIDENTS,

First District,	C. R. Agnew, New York.
Second District,	Isaac H. Cocks, Queens.
Third District,	Erastus Corning, Albany.
Fourth District,	Timothy Hoyle, Clinton.
Fifth District,	James Geddes, Onondaga.
Sixth District,	Joseph Juliand, Chenango.
Seventh District,	D. D. S. Brown, Monroe.
Eighth District,	Marcus H. Phillips, Orleans.

CORRESPONDING SECRETARY,

Thomas L. Harison,	St. Lawrence.

RECORDING SECRETARY,

William H. Bogart,	Cayuga.

TREASURER,

Adin Thayer,	Rensselaer.

EXECUTIVE COMMITTEE,

Davis Cossitt,	Onondaga.
Gerrit S. Miller,	Madison.
C. C. B. Walker,	Steuben.
W. M. White,	Livingston.
Henry E. Alvord,	Orange.
L. W. Ledyard,	Madison.
James McCann,	Chemung.
T. R. Proctor,	Oneida.

EX-PRESIDENTS,

George W. Hoffman,	Chemung.
Horatio Seymour,	Oneida.
N. Martin Curtis,	St. Lawrence.
Robert J. Swan,	Seneca.
John D. Wing,	New York.

Mechanical and Consulting Engineer,	Henry Waterman.
Consulting Veterinarian,	James Law, M. R. V. C.
Chemist,	Wm. M. Habirshaw, F. C.S.

STATE OF NEW YORK.

No. 143.

IN ASSEMBLY,

March 31, 1883.

FORTY-SECOND ANNUAL REPORT

OF THE NEW YORK STATE AGRICULTURAL SOCIETY FOR THE YEAR 1882.

New York State Agricultural Society,
Albany, *March* 31, 1883.

To the Honorable Alfred C. Chapin,
Speaker of the Assembly:

Sir — I have the honor to transmit herewith to the Legislature, the Forty-second Annual Report of the New York State Agricultural Society, for the year 1882, with the accompanying abstracts and documents.

Very respectfully,
Your obedient servant,
T. L. HARISON,
Corresponding Ssecretary.

REPORT OF THE EXECUTIVE COMMITTEE.

The year 1882 may well be regarded by the farmers of our State as one of plenty and prosperity, in both respects equal to its predecessor, though in neither was the distribution as uniform. The season opened cold and dry, and in the month of April it seemed impossible but that the crops of winter grain and of hay must prove very deficient. After the first of May, however, the abundant rains and moderate temperature favored both these important crops, and produced an abundant harvest. Under the same influences spring-sown grain gave a full average yield. The prices of wheat and barley have been so low, however, that the grain-growers are less fortunate than in recent years. The corn crop suffered in its early stages from the cool and rainy weather of May and June, but so far recovered in July and August as to produce almost as much as in 1881. Dairy produce, somewhat reduced by the drought of the late summer and autumn, excepting in the northern counties, has commanded very full prices, and this interest has seldom had a better year. The disappointments of the season have been the partial failure of the potato crop, and the remarkable failure — total in some parts of the best fruit districts — of the apple crop. To hop-growers the year has been a phenomenal one. The crop, though of good average quality, fell short from a third to even a half in weight, but owing to the failure of the crop in England and on the continent of Europe, it has commanded prices much higher than have been paid at any time during thirty years, if ever before, so that the proceeds have been, in the aggregate, enormous. It is to be wished that the good fortune thus showered upon the hop districts might not have the usual and almost inevitable effect of causing the business to be immediately overdone.

For a more full account of the season and crops reference is made to the three bulletins issued from the office of the society in May, July and November. By the last of these it appears that a somewhat increased area has been sown with wheat, and that, notwithstanding late sowing and drought, it went into winter in good condition.

The health of farm stock has been generally good, with the exception of one rather alarming outbreak of Texas fever in Cayuga county. To such misfortunes we shall continue liable so long as Texan cattle are permitted to be brought into the State, except during the winter months; and if we are, as we seem to be, powerless to prevent this, it might, at least, be made unlawful to keep such cattle within the State, excepting in yards or stables, and under such restrictions as to prevent the infection of fields, pastures and country roads, and the communication of the disease to home-bred cattle by contact or otherwise.

During the forty-second Annual Cattle Show of the Society, held on the grounds of the Central New York Agricultural Association, at Utica, the 25th to the 29th of September, the weather was fine, and the attendance consequently large. The exhibition was, as a whole, extremely good, respectable in all its departments, and in some of them much fuller than usual, especially so in implements and machinery, of which the display was characterized by both extent and variety. In the live stock classes there was a great falling off from the very large entry, but the numbers on exhibition were, of cattle 333, of horses 101, of sheep 135 pens, of pigs 76 pens, and of poultry 394 coops. Of the cattle the shorthorns were fewer than usual, but included a number of well bred and useful animals, shown generally in but moderate condition. The Devons were both numerous and good, six herds competing for the herd medal. Of Herefords Mr. Corning of Albany was the only exhibitor, showing not only breeding stock, but two fine five-year-old oxen from his long-established herd. Of the milk breeds the Holstein class was larger, and the Ayrshire smaller, than in recent years, but in both there were many fine animals. The Jerseys (78 in number) included some very well-known animals and representatives of most of the best herds in the State. Of Guernseys all the animals but one were from the Fernwood Farm herd, or of Mr. Ledyard's breeding. Polled Aberdeen or Angus cattle were shown by Mr. Redfield of Batavia, and Swiss cattle by Mr. Rider of Cambridge.

Of horses, while but half the number entered were on exhibition, the quality was generally very high in the classes of breeding stock, both heavy and light, but below par in the classes of harness and saddle horses, which is probably to be accounted for by the fact that the demand for good work horses for all purposes, at high prices, has been equal to the supply. In the new class for Shetland ponies, Mr. Watson made a very pretty exhibition, but had no one to compete with him.

Of the different breeds of sheep, the display was very creditable, and of pigs, the small breeds and Berkshires were of particularly good quality. The show of poultry was much as usual in number and in variety.

There was a good show of farm produce in the various classes, especially of dairy produce and of vegetables, and a well-arranged though not a large show of fruits and flowers.

The evening meetings were usually well attended, Mr. I. K. Felch of Massachusetts opening the first evening's discussion on poultry. On Wednesday evening the subject of ensilage and soiling was discussed by Mr. F. S. Peer of Palmyra, and others, and on the last evening Dr. Sturtevant presented a paper on the culture of potatoes.

The receipts at the gates amounted to $15,605, as against $11,089.84 taken at the gates during the last previous meeting at Utica in 1879.

Forty-one analyses of fertilizers have been made during the year for the society by its chemist, Mr. Habirshaw. The increased number, as compared with previous years, indicates a larger employment of commercial or manufactured manures in our State, and the results of the analyses, a tabulated statement of which is appended to this report, are in some respects deserving of study. Of the forty-one samples, three were Peruvian guanos, three salts of potash and of ammonia, and three were ground bone — all either natural substances or simple compounds which are to be regarded as ordinary articles of commerce rather than as manufactured manures. One was a sample of what are called Canada ashes, and three are simply non-descripts. One of them, a mixture called by a queer name, "farmers' promoter," sold for $37 and estimated, according to what appears to be a very fair schedule of values, to be worth less than $18 per ton; another sold under the name of rotted bone for $14, and worth by the same schedule $11.27; while as regards the third, called "guano substitute," sold for $46, the analysis gives insufficient data for estimating the value: but as it contains more than eight per cent of nitrogen and nearly ten per cent of phosphoric acid, it is probable that the price is not very excessive. Of the remaining twenty-eight samples, fifteen are properly superphosphates, with or without nitrogen (in no instance more than probably belonged to the bones of which they were made) and thirteen are called "special fertilizers." While aware that no schedule of values is to be relied upon as furnishing much more than a ready means of comparison, it may be noted that these samples being estimated by allowing Professor Johnson's prices of 1881 for nitrogen, twenty cents per pound or $4 per unit, and for potash four and one-half cents per pound or ninety cents per unit, and adopting the price of $2 per unit, for available phosphoric acid, because it plainly appears to have been obtainable at or under this price in Lister's acid phosphate, in the dissolved bone of the Farmers' Fertilizer Company of Syracuse, and in Williams, Clark & Co.'s dissolved bone black, and for insoluble phosphoric acid the same price as for potash, because it costs nearly this price, but not quite, in Cooper's and in Baker's ground bone, it will be found that the simple superphosphates show much better than the so-called special fertilizers. Thus estimated, of the fifteen samples of superphosphates proper, in the case of four the valuation exceeds the price, and with the other eleven the price exceeds the value. The aggregated prices per ton of the fifteen amount to $542.50, the estimated values to $469.03, the prices being thus, on fifteen tons, $73.47, or fifteen and two-third per cent. in excess of the estimated values. Of the four samples of which the estimated value exceeds the price, the excess is $12, or an average of $3 each. Of the eleven samples of which the estimated value is less than the price, the difference is $85.47, or an average of $7.77 per ton each. With regard to the special fertilizers, the case is worse. The thirteen samples aggregate in price $642, and in estimated value $448.01, the price being 43.3 per cent higher on the average than the estimated value, and the average difference between price and estimated value $14.92 per ton. It seems to follow either that the schedule of values used is much lower than justice requires, or else that farmers are paying for these compounded fertilizers a good deal more than they are worth.

Of the three samples of Peruvian guano, No. 4 cost $68 per ton, and contains phosphoric acid, available and insoluble, and potash amounting, by the schedule used for the samples above considered, to $18.24. It contains also eight per cent of nitrogen, costing by difference $6.22 per unit, or over thirty-one cents per pound. No. 12 cost $64 per ton, and contains 7.58 per cent of nitrogen, a total of 14.09 per cent of phosphoric acid, and 2,54 per cent of potash. Estimating the phosporic acid at nine cents per pound, or 1.80 per unit (which is Professor Johnson's price for 1881 for phosphoric acid in Peruvian guano), and the potash at ninety cents per unit, we have for these a valuation of $27.65, and there remains $36.35, or $4.79 per unit for the $7.58 per cent of nitrogen. If No. 4 be estimated in this way, the phosphoric acid and potash together amount to $26.88, leaving $41.12, or a little over $5 per unit for the eight per cent of nitrogen. In sample No. 30, described as guaranteed Peruvian guano, costing $54 per ton, there were found 5.51 per cent of nitrogen, and 19.95 per cent of phosphoric acid, of which 5.63 per cent was available, and 14.32 per cent insoluble. Computed by the first of the above methods, the nitrogen in this sample cost about $5.25 per unit. By the second method the cost is made only $3.10. These calculations show how little certainty can be attained in computing the value of manures, but taken together with the cost of nitrogen in sample No. 17 (sulphate of ammonia containing a little more than twenty per cent of nitrogen and costing $100 per ton), they indicate a market value for nitrogen in manures of this character (guanos and salts of ammonia) of about $5 per unit.

The society has lost during the year one of its ex-presidents, Benjamin N. Huntington of Oneida, who died on the 10th of November in the sixth-sixth year of his age. Mr. Huntington, who filled the office of president in 1860, was for many years largely interested in farming, and was most useful in the work of the society while able to take a share in it.

By the death, on the 26th of October, of Mr. X. A. Willard, the agriculture of the State, and especially the dairy interest, has lost one of its most efficient workers. As a writer, a teacher and an organizer, he rendered services, to recount which it would be necessary to write the history of cheese making in America for more than twenty-five years.

Mr. James Vick, of Rochester, died on the 16th of May at the age of sixty-four. In him the society loses a most useful member and steadfast friend. In the business which he established and successfully prosecuted, that of supplying seeds to all parts of the country through the post-office, he did much to promote the adornment of country homes. Mr. Vick was a regular exhibitor for many years at the fairs of the society, his display of cut flowers being usually the largest and most varied in the show, and he was a member of the executive committee in 1874 and 1875.

The committee also record with deep regret the deaths of Mr. Carl Heyne, at his farm at Red Hook, on the 13th of March; of Mr. George P. Jackson, of Albany, on the 2nd of July, and of Mr, Patrick H. Shaw, of Albany, on the 22nd of November.

TREASURER'S REPORT.

Dr.

To cash on hand January 18, 1882		$2,989 82
State on account of premiums		4,941 45
Receipts of Utica fair:		
From sales of tickets	$15,604 99	
refreshment privileges	1,361 15	
annual members	528 50	
sales of catalogue	87 00	
fines	24 00	
		17,605 64
From life members		190 00
C. N. A. R. & H. Ass'n, for water supply		500 00
State annual appropriation		1,706 25
State on account of premiums		3,058 55
		$30,991 71

Cr.

By expenses of annual meeting	$16 00
expenses of previous years	515 29
salaries and traveling expenses	4,030 76
incidentals in secretary's office	30 84
postage stamps, etc.	126 30
library	80 70
stationery	188 72
Elmira fair grounds, insurance on buildings	373 86
Annual fair at Utica, 1882, including rent of ground and buildings	11,332 22
premiums and premium expenses	8,839 01
cash in bank	5,151 00
cost of medals on hand, gold, 4 ; silver, 6 ; bronze, 20,	270 31
cash in secretary's office	36 70
	$30,991 71

ADDRESS.

DELIVERED BEFORE THE NEW YORK STATE AGRICULTURAL SOCIETY, AT THE ANNUAL MEETING, JANUARY 17, 1883.

By John D. Wing, President.

It has been the custom of retiring presidents of this society to make a short address giving a condensed report of the workings of the society for the past year, and some suggestions as to its future. It affords me particular pleasure to report the past year as having been one of the most successful in our history, and our treasury in better condition to-day than for years. I am particularly gratified to note the increased interest in the old society by many of our members who have not been with us recently. Of course the numerous local societies have done something to draw from our numbers, but the waning strength of some of these has brought many of the children home to the mother society where they are always welcome.

Our annual fair in September at Utica was a very full and interesting exhibition, particularly in farming implements and blooded stock. We were fortunate in having pleasant weather, our attendance was exceptionally large, and nothing occurred to mar its success. I trust the increased interest that has been manifested the past year may continue, and in the near future our meetings may be what they were for so many years, one of the most delightful reunions that New York farmers can enjoy. Now that science is doing so much for the world, there is certainly enough novelty continually cropping up in the way of agriculture and its machinery to interest us, and there is no way of learning the application of these new ideas as thoroughly as by meeting together and discussing them, and giving each other the benefit of our several experiences. Nearly all manufacturers have their societies to meet and discuss subjects of interest to them and their employes; then why not the farmer? It is true there are town societies that meet in the winter for this purpose, but necessarily at a State gathering it would furnish a much larger scope for facts and results of experiments. At our recent fair at Utica, the evening devoted to the discussion of silos was one of great interest to a very full attendance, and many facts of great value to those interested in this experiment were brought out. I should like to see these discussions more a feature of our gatherings than they have been of recent years, and I think the society should edit and publish a report at least monthly, giving its members carefully collected facts bearing on agricultural interests in this State, and its columns should be open to all who would favor us with papers on any subjects of interest to the farmers of New York. Of course this would require to be under the direction of the board. But let us put more life into the society; we have the means, we have the influence, and with proper energy our usefulness would be much extended.

Why is it to-day that farming lands in the great State of New York are worth little if any more than they were forty or fifty years ago? Lands in the far west have increased in tremendous ratio. Of course there are many reasons why these lands in the west should advance, but why is it our farms do not? The discrimination against our State by the railroads has done some of this, but not all; a good deal is due to the apathy of our farmers; many of them are working as did their grandfathers, waiting for certain stages of the moon to plan their work, and treating their cattle when sick by boring their horns, and such absurd nonsense; there are thousands of such in our State. This all comes from want of education, and is it not our mission to enlighten them, and may we not do it by proper efforts? Agriculture is the noblest pursuit of man, and why should not the same energy be put forth in its success as in the arts, science or business generally? Many of us do not realize the fact that our State contains nearly one-tenth of the entire population of the country. Is there sufficient reason for us to sit down and bewail our position because the great west can send us grain and meat at less money than we can produce it? Let us buy our grain and meat where we can buy it cheapest, and instead of vain efforts at legislation to hamper railroads in their business, let us apply ourselves to such labor as will be productive of profit to us. The day of old-fashioned farming, as it is called, is past: to be successful now a farmer must be progessive; he must practice what is called high farming. Let each adopt some specialty which is best adapted to his surroundings and master it thoroughly, so as to attain success through his superior knowledge of his business. To feed five millions of people in the State of New York offers enough for all of us to do.

In your live-stock, realize the fact that it costs no more to keep a good animal than a poor one. Breed up in whatever line you may be interested. Our old style of cattle and sheep served the purposes of their day, but necessity has shown us that they cannot compete with the improved breeds of the present. There is no occasion for a farmer to go into fancy stock and pay enormous prices in competition with those who farm for pleasure, but by the use of pure sires the quality of a breed may soon be implanted in a herd of high grades. It is a great mistake to use any but a pure-bred sire.

Many make the further mistake of trying to cultivate too much land. The result is they succeed in nothing. Ten acres properly cultivated are worth fifty half done. One of the greatest drawbacks we have to-day is high labor; it is more expensive than any thing else in proportion, and without good reason. There is some probability that the tariff, that was passed as a war measure, may be so modified that the onerous taxes of the past twenty years may be removed, thus enabling the working man to accept lower reward for his labor, as the cost of living shall be proportionately reduced.

A great aid of agriculturists has been organized by our State legislature in the establishment of the New York Agricultural Experiment Station at Geneva, under the efficient management of the scientific and practical Dr. E. L. Sturtevant. Necessarily its results as proven by practice will come to us slowly, as conclusions are not to be anticipated, but worked out in the most thorough manner. I look forward to the lessons to be learned at this institution with great confidence, and any thing we can do to aid the station should be our pleasure. Although it is a separate organization, it is so nearly allied to ours that our interest should be identical. With the liberal aid given us by our State legislature, let us prove ourselves worthy of the trust confided, and leave no stone unturned to enlighten our farmers, and put into them some of the progressive spirit of the age. When this is accomplished we shall hear fewer complaints of their sons leaving the farm for the more alluring life of the cities.

Reviewing the whole field, there is little reason for the discouragement so often expressed by the farmers of this State. A kind providence has the past year given to us bountiful returns for our labor, and the prospects for the future of the farmer in the State of New York are quite as bright as for any other industry.

In retiring from the position of president of the society, I beg to express my thanks to the officers and members of the board, and to the members generally, for their uniform kindness and courtesy during my administration, and I know that my successor will be as ably seconded.

EXPERIMENTAL OBSERVATIONS ON THE POTATO.

By E. Lewis Sturtevant, M. D., Director of the New York Agricultural Experiment Station.

A generation ago potatoes seem to have been raised without difficulty, and large crops were the rule rather than the exception. At the present time the potato is grown less readily, and large crops are the exception rather than the rule. A generation ago the tuber was large and coarse as compared with our modern varieties, and the plant bore seed balls in abundance, but the modern potato is far superior in quality to the potato of our fathers' boyhood, and the plant has ceased to be generally fruitful in seed. We seem to have in these statements an illustration of the general law that nature spares in one direction in order to spend in another. With improvement in quality comes less fruitfulness in seed ; with poor quality may come abundance of tuber and abundance of seed. As the potato tuber became of very fine quality the plant in its turn changed, showing less resistance toward unfavoring circumstances and calling for more attention on the part of the cultivator to support it in its artificial condition. In a word, the potato has become domesticated. In order now to obtain favorable results we must recognize this domesticated condition, and by a study into the habits of the plant, habits derived through heredity as well as through environment, to search after a knowledge of the present habits of the plant in order that we may supply to it those artificial conditions which shall give the most encouragement toward large and fair yield.

Commencing then with the tuber we may ask ourselves what do we already know from the Station data.

First. The tubers are borne upon underground branches, either at the apex or in the axils of rudimentary leaves, and these tubers are formed only on these underground branches and never on the true roots.

Second. These underground branches may be short, thus bringing the potato tuber very close to the true stem, and in variations may even appear stemless on the one hand, or possess a long one on the other. In cases, as when the potato seems to be irregularly formed with projecting nodules, these nodules seem really perfect potatoes, the stem being obliterated and the two potatoes, as it were, becoming grafted together.

Third. The underground stems, which have already formed small tubers at their extremities will, by being exposed to the light, change the course of their development, and from the tuber as a bud, branches will issue, and what was to have become the potato, ceasing development, becomes a portion of a stem. When the potato has attained nearly its full size, exposure to light not only gives it a green surface, but also seems to favor the development of nodosities, which in turn originate shoots of active growth.

Fourth. A potato whose eyes have been injured and upon which small tubers have already formed may not be able to vegetate and yet may have the power of transferring through a process of growth (while yet buried, without any appearance of vegetation), its own nutriment into new potatoes, which increase in size as the seed becomes disorganized.

Fifth. Under normal conditions the tuber is formed and grows within the upper few inches of the soil above the true roots, while the roots occupying the space below the tuber penetrate the soil to a considerable depth.

Sixth. In some few instances where the roots of the potato plant occupied a soil whose temperature was maintained at the same temperature as the atmosphere, tubers did not form, but the same plants being removed to the ground, immediately occupied themselves in the formation of tubers.

Seventh. When a whole tuber was planted, rarely over three or four eyes developed into shoots, provided the eyes were uninjured ; when, however, the eyes of the potato were injured by the application of scalding water, a large number, even up to thirty or more shoots to the eye, became developed, and each eye of the potato sent out its shoots. Where the scalding process was carried a little further, small potatoes, even up to twenty-five in number, were developed at each eye in the place of, or intermixed with, shoots. Where the scalding process extended a little further, stems developed below the surface of the potato, penetrating its surface, became swollen, emitted underground branches, which in turn bore potatoes at their extremities, thus offering the phenomenon of potatoes within the potato, without appearance of vegetation. When potatoes from which the eyes had been carefully removed were split in halves and the halves planted, these remained dormant within the ground for a long time without rotting and without any appearance of decay until finally callosities, in some cases taking on the appearance of tubers, appeared upon the cut surfaces where the eyes had been removed, along the cambium region of the tuber, and even upon the central portion of the tuber, thus indicating that the vital points of the tuber while strongest in the region of the eye and in the cambium region, are yet quite generally disposed throughout the substance.

Eighth. Where potato skins were planted the whole substance of the seed became absorbed into the growing potato. When, however, whole potatoes were planted the line of absorption rarely, if ever, followed the cambium region, but if the examination was made before the complete breaking down of the tissues the absorption seemed to offer definite lines and to be confined to a definite region. In some cases, however, no absorption took place and the seed potato remained unchanged in form and solidity up to the time when the new potatoes were fit to be eaten.

Ninth. When a slice which bisects several eyes is taken from a tuber and this slice is then soaked in a solution of carmine in weak aqua ammonia, there becomes visible a certain structure of the tuber which may be described as a central axis, extending from the stem to the terminal eye, and connected with the other eyes by branches. An application of iodine to the cut surface also develops the fact that these portions which we, for convenience, call stem and branches, contain less starch than do the intervening regions, while a microscopic examination also shows that these are composed of vascular tissues rather than starch cells.

Tenth. Under conditions, as yet scarcely understood, fair potato tubers form in the axils of the leaves of the stem, in the light; often at each axil.

These facts of structure seem to suggest that the strongest vegetative point of the potato is in the eye; that an important vegetative zone is defined by the cambium region, while, moreover, the extension of the vegetative zone of the eye below the cambium region also exerts an influence upon the growth of the eye, and that while each eye rules in a measure over its own territtory, yet it is in a measure subordinate to the aggregate of the eyes which we define as the whole potato.

A line of investigation based upon these reasons gathered from structure, has this year given us surprisingly uniform results and has developed facts of great interest to the cultivator. Our plan has been to dig the potato plant at various and frequent intervals from planting to maturity, and by careful noting of the appearances found and by a careful grouping of uniformities, to seek out the relationships between practice and theory. A general summary of our season's experience is that the method of cutting the potato is one of the most important factors which we possess that bear upon yield. We have noted that there was less influence to be ascribed to the amount of potato used for seed than to the method in which the seed was cut. We have noticed that, as between single eyes cut improperly and the whole potato used as seed, the advantage of yield was with the whole potato, but that when the comparison of the whole potato used as seed was made with eyes properly cut, then the advantage became manifestly in favor of the single eyes; that when the produce of eyes cut shallow was compared to the yield as between hills, the yields were surprisingly uniform. The same may be said where eyes were cut deeper within the substance of the potato, and where variation occurred the yield was in favor of those eyes which were cut the deepest within the substance of the potato. When half potatoes were used for seed and the comparison made between the product of the two halves, in those cases where the vegetating eye happened to be cut shallow the yield was markedly inferior to the corresponding eyes which deeply penetrated the seed. We feel, therefore, safe in announcing, as the result of this year's experimenting, that all our observations are favorable to the belief that in using single eyes cut so as to include the whole vegetative zone, which we have seen penetrates within the substance of the potato, we are securing results superior to those gained from any system of cutting which may be made at random, or from the use of the whole potatoes themselves as seed.

Several curious circumstances which may have a bearing upon the profitable growing of potatoes may also be mentioned. One is that where shoots were broken off and planted, in no case did the terminal point of the shoot continue its growth and furnish a plant, but a bud, formed in the axil of the leaves, pushed to the surface and furnished the foliage. From this bud underground stems issued early and formed tubers, which as late as June 12 were superior in size to the potatoes from seed used in the ordinary manner; but soon growth ceased and these premature formations became left behind. Which of the buds that started into growth from these shoots seemed also to influence the crop. When whole potatoes were planted in different ways the earliest formation of tuber varied considerably. In some the tuber formed early; in others later; in some a few of the tubers grew apparently at the expense of the formation of additional tubers, and then, perhaps, becoming changed by our examination, additional tubers became formed at a far later stage. When the shoots from the three or four eyes which vegetated were broken off, then every remaining eye threw out its shoot, and these shoots in no one case seemed as prolific in formation of tuber as our single eyes planted in a similar manner.

It might naturally be supposed that where but a single eye developed from a whole potato, the yield would be superior or at least equal to that from a single eye planted in like manner, and yet, curiously enough, we have no facts to offer which would substantiate this belief. We can but suggest that as injury to the eye in the case of the scalded potato developed in some cases the formation of tuber rather than of stem, so in some as yet unexplained manner the cutting of the eye, promoting a disturbance of the vegetative zone of the cambium, had an influence in causing the formation of tuber in preference to the formation of stem.

POULTRY AS A FARM PRODUCT.

AN ADDRESS BEFORE THE NEW YORK STATE AGRICULTURAL SOCIETY, AT UTICA, SEPTEMBER 26, 1882.

By Mr. I. K. Felch, Natick, Mass.

It has been my privilege and pleasure to act for three successive years as your judge on poultry, and I am happy in being able to say that your exhibit at Albany, three years ago, was the very best I ever saw at any State agricultural association. To-night, by invitation of your secretary, I will in a few remarks introduce the question, *Poultry as a farm product*, for as an item in our trade and commerce it is immense, and deserves well your candid consideration. In consulting the reports of the commissioner of agriculture, I find the following interesting statistics in relation to the crops for 1879:

Our corn crop has increased over fifty per cent since 1870, and now aggregates over 1,548,000,000 bushels, valued at $580,486,217.

Our wheat crop reaches the snug total of 449,000,000 of bushels, with a value of $497,030,142, the increase being not quite fifty per cent.

The hay crop is estimated at 55,493,000 tons, with a value of $331,000,000, showing an increase in tonnage, but a slight falling off in value.

The cotton crop has increased from $138,000,000 to $242,141,000.

The cattle, sheep and swine slaughtered and sold to be slaughtered were valued in 1870 at $399,000,000. To estimate an increase in keeping with the increased population and increased export trade, we say $500,000,000 to be a fair estimate for 1879.

These large sums show the enterprise of our farming population.

But our census makers have left out the grandest product of them all; and as we make an estimate of the egg and poultry interest I trust we may find a product that will compare favorably with any of the foregoing.

We have nearly 11,000,000 families that consume two dozen eggs per week and twenty dollars' worth of poultry per year, which, if we compute eggs at twenty-five cents per dozen, gives us in this one item $506,000,000.

The encyclopedias give us the hotel consumption at sixty-two to sixty-eight millions, and when we add to this the restaurant, saloon, he chemical and medicinal consumption, and that in the way of manufacture, I fear no denial when I assert as a fact the egg and poultry production and consumption for the United States to be $600,000,000; and when I say that the Empire State controls by purchase and sale twenty per cent of this large industry, you must see its relative importance to you, and how it might or should affect you in making it one of the prime industries upon your farm. You may not heretofore have considered it, but surely we have in it the largest agricultural interest and produc.t I imagine I hear some say that you do not realize the price per dozen for your eggs, or are aware of this large family consumption quoted. In answer I say that the average price for eggs on the Pacific slope exceeds fifty cents per dozen; the average for 1881, in Natick, exceeded thirty cents, and if you will take the pains to examine into it you will see my estimate is low. While the common practice of farmers in the prairie districts and remote counties of packing poultry in snow and in ice in early winter for use till spring, and the immense consumption by them in summer as fresh meat, coupled with the wealthy, who consume much more than the average I quote, will more than make up for the poor, who eat poultry as a luxury.

I clip from a paper the following: "The egg and poultry shipment from Vineland, N. J., for the year ending April 1, 1882, was 208,000 dozen eggs and 52,000 pounds of poultry, shipped by rail, while large quantities were bought by dealers and were shipped from other points. The value of the above was about $65,000. The home consumption and the amount shipped other than at this station must have carried the amount way above $100,000 for that one town."

Two years ago Coney Island took 10,000 broilers per day during the summer season, and last season it was augmented to 12,000 per day, which, at four pounds to the pair, sums up 24,000 pounds; and as some of the hotels contracted at sixty cents per pound, it is a low enough estimate when we say fifty cents, or $12,000 per day, or $720,000 for the season of sixty days at that one resort.

The consumption is yearly increasing, and the quality and price increase in a like ratio. One bushel of corn will grow as many pounds of live poultry as it will of pork. Thus does it establish the fact that it will pay you far better to feed it to fowls than to swine. One bushel and twelve quarts of sound corn, or its equivalent in other grain, will keep a fowl a year. And that the average hen will lay you ten and one-half dozen of eggs per annum makes it certain for you to secure a profit of $1.20 to $1.75 per head, according as the price of eggs and poultry and grain are affected by the markets of your locality.

When kept in large numbers, and penned, in groups of twenty to thirty, in coops of 12x12, and yards of 12x60 feet, they have the past year, at this disadvantage, produced nine dozen of eggs each, and the eggs have been sold on a yearly contract at thirty-two cents per dozen.

Farmers should, in all branches of industry, operate largely enough to secure the best results in price. It is not my object to convert them into poultry farming exclusively, yet he who has planted an orchard has by no means finished his work until he shall have furnished quarters in the same for 150 to 200 fowls to the acre, making it serve the double purpose of orchard and poultry yard. This is well done by constructing houses, 15x30 feet, with "lean-to" sheds at each end, 10x15 feet, the houses divided by close partitions, and fences running from the front of one to the rear of the other; each house then, furnishing quarters for two colonies of fifty fowls each, and by the fences from one to the other dividing the orchard into half-acre fields, in each of which 100 fowls are roaming to destroy all slug borers, curculios and insects injurious to the trees, while the droppings are being absorbed as fertilizers by them. These open sheds are of great importance, for fowls like to bask in the sun and open air daily. And it seems necessary, if we would be sure of eggs hatching well in winter and early spring, that these sheds should have the ends constructed in the way of doors, exposing the shed from the south in winter and the north in summer. Thus can the same be made cool in summer and warm in winter. A fowl's heart beats 150 times per minute, while it never perspires; thus does it suffer in extreme warm weather, making a cool retreat important if we would secure the greatest profit. These houses, placed from eight to ten rods apart, will secure the fowls from the epidemic that sometimes visits them when kept in large numbers, and also will it secure the fowls roosting in their own quarters, and the plan saves much fencing.

As a rule farmers do not keep fowls in such numbers as to cause them to investigate as to their real profit, or enable them to contract for a steady supply of eggs and broilers for the market. But when it is done the best prices and surest paying patronage are the result. With 250 fowls, and the raising of 500 chickens for broilers for June, July and August, the farmer can contract readily with the poulterer, who will come to his door twice a week for his eggs and poultry, eggs and poultry being no longer a barter trade, for agencies are established throughout the country. And the cash comes in for it as regularly and certainly as it does for pork or beef. The fanciers of poultry have done much for your benefit, for through their enthusiasm, their lavish expenditure of money, their poultry exhibitions, the importation of thoroughbred stock, the extra care of the same, the stock of the country is to-day fifty per cent better in quality, the egg production twenty-five per cent greater *per capita*, and in consequence of this toning up of the interest we realize a higher price, and the product has been converted into a cash article of commerce. What farmers have done farmers can do again. And with examples before us, no one can with grace decline doing well because others have, through mismanagement, failed.

In reading the agricultural report of the Middlesex South Society of Massachusetts, I find, in 1858, one farmer, whose thirty-eight fowls, kept in small yards, under unfavorable circumstances, with a market at eighty-eight cents for corn, sixteen and two-thirds cents for eggs, and fifteen cents per pound for poultry, yielded a net profit of $1.38 per head. In 1861, in Mr. Mansfield's experiment, 100 hens, having a free range of the farm, consuming but ninety-three bushels of corn, or its equivalent, produced 147 eggs each (no chickens being raised in that year), and yielded a net profit on eggs alone of $1.35 per head, to which, had the value of the manure been added, the profit would have reached the sum of $1.60. These and other statements of $2, $2.25 and $2.50 per head profit per annum are to be found in the Middlesex South Society's reports; and, last but not least, the banner statement of Mr. Whitman in 1873. With fifty-one Leghorns, which laid 207 eggs each, sold for thirty-one cents per dozen, the cost of keeping the fowls being $1.13 each, he shows a profit of $4.04 per head, proving conclusively that with care poultry pays much better than other farm stock. Poultry culture is by no means hard work, and can be conducted by the younger members of the family, and the money may go a long way toward paying for the heavy work of the farm. If you will place 250 fowls in the hands of a farmer lad of fifteen to seventeen years of age, with the understanding that he is to raise 500 chickens, thereby making good the number of pullets in the fall, having 250 broilers and 250 old fowls for sale per year; exacting no other work from him, he taking his pleasures when his work is done, you by no means interfering with those pleasures so long as they are proper; charging him with all grain and expenses, and giving him credit for *all* eggs and poultry used in the house or sold, you will find ere long that the lad takes more pleasure in his business than his play, and becomes more business-like in his habits, being "a man among men." Give him the books and papers that treat upon the feeding and raising of poultry, which, with his daily experience, will work out for you a greater profit, when the amount of money invested is considered, than many another industry you now are well satisfied with. Put in his hands a table like the following, which gives the composition and time of digestion of the different kinds of grain and meat:

FOOD.	COMPOSITION.			Time of digestion.
	Muscle.	Fat or heat.	Bone.	
	per ct.	per ct.	per ct.	hours.
Oats	17	69	3	3
Barley	14	68	2	2
Rye	13	66	1	3
Wheat	13	66	1	3.30
Corn	11	75	1	3.15
Rice	7	92	1	1
Sago	4	82	1	1.45
Beans	23	63	3	3
Potatoes	2	23	1	3.30
Milk	5	3	1	2.15
Bacon	8	63	1	4
Fish	14	7	1	3
Beef	22	14	1	3
Lamb	20	16	1	2.20
Sugar	....	100	....	3
Fat	....	100	....	5.30

With such a list he will soon learn to make a food composed of fifteen pounds of oats, twenty pounds of corn, ten pounds of barley and ten pounds of wheat bran, having the same ground into a meal, and making it into bread as we make corn bread for breakfast, crumbling the same into scalded skim milk for his chickens, which at twelve weeks old will be a full pound larger than when fed in the old way. He will learn also that what will conduce to the greater growth in chickens will produce the greater number of eggs from the laingy stock, and that the feeding of this composition, thoroughly scalding it, for the morning feed, is excellent for the purpose. Why simply in this composition he has fourteen per cent of muscle, two per cent bone and sixty-eight per cent fat, being most perfectly balanced in these respects. He learns that beans are desirable to add to this composition when they can be purchased at $1.50 per bushel or less, then adding an extra ten pounds of beans and an extra ten pounds of corn before the grinding of his bread-making material.

He learns that, when his chickens are well grown, to feed them for eight days for the morning and noon meal on a food composed of eight quarts of corn meal, two quarts of pork scraps and two quarts of barley meal well cooked, with corn at night, and crushed charcoal kept within their reach, will fat them fit for a king or the first citizen of America to eat. This fattening process is augmented by keeping the fowls in a coop that can be darkened for a couple of hours after each feeding.

When the price of corn or other causes make it desirable to feed largely of corn to growing chicks or laying hens, it is well to feed also of fish, or sheep's haslets, in the way of meat, and if the meat cannot be secured, wheat bran should be used in equal bulk with corn, for the muscle and bone property in the hull of the wheat makes it the best of companion feed with corn for fowls.

The usual meat supply, to secure it at a very low price, is found in the beef scraps, beef and sheep heads and haslets and fish. Pork scraps are worthless as egg producing or muscle-growing food, and should be used only in severe cold weather, when heat is essential, and for fattening the stock for the shambles, long-continued feeding of them invariably breeding disease in the flock.

While potatoes are excellent as a regulator of the bowels, and to feed two or three times a week, they are not desirable to feed oftener at any thing over twenty per cent of the cost of corn.

Are the farmers of this association ready to try this experiment? If so, give the boys one coop at least of fowls that are their especial favorites, even if they be a superb game cock and his harem of hens, and let him breed these pure in blood for sale as breeding stock — for in all classes of stock on the farm it is well to breed so that the finest specimens can be sold for breeding purposes at larger prices than for mere food. This encourages the breeder and more deeply interests him in his calling, and in this case gives your boy a fair chance in his comparison of enterprise with you.

But to select from among those breeds best fitted for this egg and meat supply, we say among the so-called thoroughbred fowls of the large size, the Light Brahma, Langshan and Black Cochin; among those of the medium size, the Plymouth Rocks, Wyandottes, Houdans and Dominiques; and among those of the smallest and fit only for egg production, the Leghorns, the white variety being my preference.

The three breeds I would select, if to confine myself to thoroughbred stock, would be Light Brahmas, Plymouth Rocks and White Leghorns. But were I to give up all save those from which I could secure the very best results in eggs, broilers and roasting fowls, I would keep fine Light Brahma hens in numbers that, mated to a White Leghorn cock, would lay eggs enough for my incubating purposes — the laying stock, broilers and poultry thus being a cross-bred Brahma and Leghorn. They will lay the best in all seasons of the year, and while the eggs are larger and generally dark colored, the hens lay as many as do the pure Leghorns, while the poultry is as nice as can well be. There will be enough among them that will become broody in the whole, and we get rid of much annoyance often experienced from sitting hens.

With care you investigate the difference between soiling and pasturing cattle, you test the difference between the two systems of feeding steamed or dry food. You exact that your laborers be gentle with, and create no nervous excitement in, your milch cows, and that they do the milking quietly and with dispatch, that the very best results in milk and butter may be attained. Have you in a like manner experimented with poultry and have found it not to pay? We fear not. To you and to those who have condemned poultry as a farm product on hearsay testimony, we say give the poultry a fair trial, investigate and foster an industry that will surely pay.

SILOS AND ENSILAGE.

A PAPER READ AT THE ANNUAL MEETING OF THE NEW YORK STATE AGRICULTURAL SOCIETY, JANUARY 17, 1883.

By HENRY E. ALVORD, of Houghton Farm, Orange County.

It seems a pity that the plain English words, pit, pitting and pitted, were not at first adopted in connection with this, to us new system of providing cattle with succulent forage throughout the year. The term "pitted rye," or "pitted clover" would now be fully understood. But new things create new names, and the words adopted from the French are now so generally used that when considering this subject we must talk about *silos* and *ensilage*. (We need not, however, attempt the French pronunciation.) The word *silo* can be traced across Europe, and its equivalent found in the Roman, Greek and even Persian languages, in all applied to an underground excavation or pit used for the storage of grain and green crops. The pits thus used in early times, as described by a number of ancient writers, had the essential requisites of the modern silo, drainage, dryness and perfect exclusion of the air.

The knowledge of this method of preserving green forage came to the present agriculture of Europe in a manner unknown, but it was practiced in Hungary at the beginning of the present century, and in Germany not many years later. Excellent descriptions of the process were published in East Prussia in the year 1842, and similar accounts exist of its application in Spain, France and Mexico, various vegetable products being thus preserved, including the leaves of trees and vines. In Germany it was especially useful in keeping beet leaves and beet pulp in connection with the sugar industry. In France it was mainly used in the same way until a beet sugar manufacturer near Stuttgart, apparently by accident, applied it to maize about the year 1855. The experiments of Auguste Goffart came a little later, and it was through the attention his efforts attracted that the silo, as we now know it, was introduced into the United States.

In the year 1873, and again in August, 1874, a description of the Hungarian method of making "sour fodder," in the crude trench form, appeared in *The American Agriculturist*. The same journal published, in June, 1875, an illustrated account of the European experiments with ensilage, based upon reports in the *Journal d'Agriculture Pratique* of Paris. The report of the United States Department of Agriculture for 1875 contained (pp. 397–408) a full description of "The French Mode of Curing Forage," its origin, the silos, the usual methods of cultivating crops for and of making the ensilage, effects of fermentation in the silo, and the value of ensilage in stock feeding.

The general principles of the silo were applied to the preservation of different products in numerous places in America between 1870 and 1880. At the Illinois Industrial University broom-corn seed and the green corn plant, whole, were kept in this way for months. In 1877, under the title of "An American Silo," a dairy barn in Westchester county was described and illustrated in a farm journal, the special feature of which was a cellar or pit constructed for storing brewers' grains and preventing their fermentation and decay by pressure and exclusion of air. Thus we had the means of knowing something on this subject, had its importance been realized, before the special results of Goffart's work. The latter published his book on "The Ensilage of Maize" in 1877. This work was noticed in a paper read by ex-Governor R. M. Price, of New Jersey, on the 6th of December, 1878, at the International Dairy Fair in New York city, and subsequently printed in the Fair "proceedings." The subject attracted attention at once, and was discussed with interest by the farmers and dairymen present, being undoubtedly the first time that ensilage occupied the attention of any public meeting in America. That was only four years ago. Since then several books on silos and ensilage have been published in this country, besides the very general discussion of the merits of the system by the agricultural press.

The first person in the United States who built silos and made corn ensilage for cattle food as a regular part of his farming operations was Mr. Francis Morris, of Oakland Manor, Howard county, Md. He saw an account of the process in a French newspaper in the early part of 1876, at once opened correspondence with Mr. Goffart, and that same year raised five acres of corn in drills and preserved it in silos. The following year he repeated the trial. It was this experience of Mr. Morris that was given at the New York Dairy meeting, as above mentioned. From this beginning the system has rapidly spread in America, and there are now hundreds of silos in use in different parts of the country. A list is published of over 100 in Vermont, and they are most numerous in the Eastern and Middle States. But they are also to be found as far south as the Gulf States and as far west as Nebraska.

The location, shape and material for any silo should be largely governed by the surrounding circumstances. Silos may be built wholly above the surface of the ground, partly excavated, or wholly underground, and may be of stone, brick, concrete, wood or earth. The structure must be strong enough to hold its solid contents at fifty pounds per cubic foot and the pressing weights added. It should be air-tight and water-tight. Whether it should be so placed as to protect the contents from the action of frosts is still an open question, but ensilage is probably not injured by freezing while under pressure. When equally convenient, however, it is best to place the silo so as to maintain an even temperature of its contents at all seasons. It should be located so as to facilitate filling and also removing the ensilage. It is well to have the bottom on a level with, or not much below, the feeding floor, with a door into the silo from this floor; the door must be made air-tight. The inner walls of the silo must be vertical and their surface smooth, to permit the ensilage to settle evenly in the pit and the cover to follow. A large upper surface is not desirable and the depth should be as much as either length or width and preferably more. Several small silos, independent or connecting, are better than one large one. A large and shallow silo of masonry or other strong walls may be advantageously divided into several small and deep ones by putting in plank partitions. It is very desirable to have compartments of such a size that one can be filled, covered and weighted in one working day. A substantial masonry silo, by greater durability and better action, will generally be found true economy, yet cheaper structures, with walls of wood or earth, sometimes do as well. Silos are in satisfactory use built wholly above ground; the walls of two thicknesses of inch boards, on the inside of a strong frame, with and without tarred paper between the boards. Underground silos, if not cement-lined, must be perfectly drained. Successful silos have been made by excavations in a heavy clay soil and in the side of a compact well-drained gravel bank; in these cases the walls are coated with cement, like a cistern, or, if solid, the earth sides left bare. The crude form of silo still in use in parts of Europe is a long narrow trench, with sloping sides; this is filled with fodder and as much more piled above, the whole then banked up and covered closely with earth, which serves both for pressure and sealing. The silos now in use by Mr. Morris on his Maryland farm are substantially of this pattern.

Indian corn, rye, oats, the different millets and clovers, vetches, the cow-pea, sorghum and sorghum seed, broom-corn seed, beet-tops and various grasses have been successfully preserved green, as ensilage. But corn is so easily grown and is so much more productive on a given area than all other plants yet tried, that it is *the* ensilage crop of America. This is so fixed that the word "ensilage," used alone, is already understood as meaning ensilage of corn. The large varieties of luxuriant foliage, regardless of grain, are those best for the purpose. The corn is usually grown in drills, three or four feet apart, on highly manured land and thoroughly cultivated during growth. The plant is not cut as young as when the system was first advocated, but allowed to approach maturity, the most favorable time being after the ears have fully formed, but before any part of the stalk dries. Rye makes good ensilage, and, with heavy manuring, a crop of fall-sown rye can be taken from land in time to get a corn crop from the same ground. While the tonnage of green rye from an acre is much less than of corn, the crop is a more certain one, and the plant so much more nutritious that full as much food from the acre can be obtained in rye as in corn. In practice it is found that the feeding value of ensilage from rye and corn is as to five to nine.

In filling the silo, the fodder, whatever it be, should be cut and taken from the field, without delay, to a chaffing machine placed near the silo and then quickly cut into lengths of not less than one-fourth, nor more than one inch. The chopped fodder should pass at once into the silo and there be spread of even thickness, this being a matter of importance. The tramping down as the filling proceeds, which is generally practiced, is more likely to do harm than good, by creating uneveness in the mass, unless it is done with best of judgment. The fresher the fodder, when it goes into the silo, and the sooner the compartment is filled, the better. No injury is done by having the material quite wet with dew or rain at the time of pitting. In order to have the silo full after settling, there should be an upward extension of the side walls, one-third the depth of the pit, and the filling should be to the top of it. This curb may be temporary and removed after the ensilage has fully settled. Immediately after the silo has been filled a cover of stiff plank should be put on, closely fitting, yet just loose enough to prevent catching on the side walls during the settling. Upon the cover apply pressure in any convenient form. The simplest method is by weights, using 150 to 250 pounds to the surface foot; these limits are safe without regard to the depth of the silo. The object of the weight or pressure is to force out air and prevent fermentation, and the weight is only needed for the uppermost six feet of ensilage — all below that depth being sufficiently compressed by the weight of the mass above. There are several devices in use for applying the pressure by screws and levers. What is needed is a continuous following pressure — the details are immaterial. Nine-tenths of the settling occurs within sixty hours from the time the pressure is applied.

Harvesting the crop and filling the silo is the main cost of ensilage and it is in this work that the greatest opportunity occurs for system and economy. The location of the growing crop with reference to the silo, and the arrangements for hauling, cutting, storing and pressing, require judgment and skill. Ensilage in the silo costs from one to four dollars a ton, according to the management. The average cost in the United States the past season was about $2.25 per ton. Ensilage being four-fifths water, the solid substance costs from ten to eleven dollars per ton. This is just about the value of a ton and one-third of good dried corn fodder, which also contains one ton of solid matter. Therefore the cost of preserving a ton of food is just about the same by the two processes, in silo and field curing.

The silo should remain undisturbed long enough for the fermentation to reach its maximum and the whole mass then becomes cooled. In several practical tests the greatest heat has been found between the fifth and tenth day after closing the pit and putting under pressure, and it has required several weeks to cool thoroughly. It is generally from ten to twelve weeks before the ensilage is in good condition for keeping and feeding, and it may be left as many months without injury, if not as many years. In opening a small part of the cover should be removed at a time and the section uncovered cut down from top to bottom of the silo like a mow of hay. If, by cutting and removal, a new surface is thus exposed every two or three days no decay occurs on the exposed portion. In the case of a deep silo, without an opening in the side, the least exposure is made by removing the entire cover and working downward over the whole surface. Corn ensilage comes out in a moist condition, of a dark greenish-brown color and with a pungent odor and more or less acid taste, usually quite sharp. The extent of the fermentation and the degree of acidity developed vary much with different silos and with successive crops in the same silo. These are points of importance not yet under control and not likely to be until careful investigations throw more light upon the chemical processes of the silo. But by following the course described, the changes can be so controlled as to prevent decay. It may be accepted as a fixed fact, that any plant, good for cattle food when green, may be preserved in a succulent state, as ensilage, and kept in an edible condition throughout the year.

As a rule all horses, mules, cattle, sheep, swine and poultry are fond of ensilage. Occasionally an animal will be found to refuse it when first offered, but these soon learn to like it and, with the rest, eat it with avidity. Most farm animals prefer ensilage to the best dry forage and many will eat it rather than good roots, when both are placed before them. The sharp acidity of ensilage fresh from the silo seems unobjectionable to the animal, but if kept loosened up for half a day, the material has less apparent acid, its greenish hue usually brightens and it is then evidently eaten with more relish. That it is very palatable is shown by cattle eating a much greater weight of ensilage per day than of the same plant in its natural green state. A cow or steer of 1,000 pounds weight will often eat 120 pounds, and sometimes 140 pounds, of corn ensilage in a day.

From the many practical results on record, it is plain that corn ensilage cannot be fed alone, with profit, unless it be merely as a maintenance ration. Store hogs have been wintered upon ensilage alone without loss, but the corn plant is an incomplete food, both in its growing state and as ensilage. The best results have been those where ensilage has been fed in limited quantities, forty, fifty and certainly not exceeding sixty pounds per day to 1,000 pounds live weight, and in connection with a liberal allowance of grain to secure the proper nutritive ratio. Many careful feeders prefer that the ensilage shall not constitute the only coarse forage, and so use forty or thirty pounds only, with five or ten pounds of hay added, besides the grain. Some well-conducted trials show most satisfactory results from using ensilage mainly as a condiment, or addition to the usual dry winter diet, and as a substitute for roots. In nearly all cases where ensilage is used as a considerable portion of the daily ration for horses and cattle, but not exclusively, its excellent hygienic effect is apparent in the thrifty appearance and action of the animals, their smooth coats and the healthy condition of the bowels. Like any succulent food, ensilage tends to maintain the flow of animals in milk. In the case of breeding ewes, it has been substituted for turnips and mangolds with good results, and their lambs have learned to eat it sooner than any other solid food. Milch cows, on an ordinary winter diet, usually show a gain in quantity of milk when a portion of ensilage is added to their daily ration, but like results do not follow the entire substitution of ensilage for other coarse fodder.

Errors have arisen from comparing corn ensilage with hay, straw and other kinds of food, even including grain. No such comparison can be justly made, or at least not until ensilage, as a food, has a more even quality, so that a standard may be fixed for it. With the present knowledge of the subject, the primary question is as to the effect of this process upon any forage plant thus preserved. What is the feeding value of rye or clover as ensilage compared with the same plant in its growing state or cured as hay? Likewise, corn ensilage must be compared with the green maize, cured corn fodder, or stover, and grain.

With this view of the subject some comparative trials have been conducted in our experiment department at Houghton Farm, Orange county, the results of which will now be given, under three different heads.

I. To ascertain roughly which would hold out the better in feeding, corn and its fodder, field cured, or the matured plant as ensilage.

In a field of ten acres of growing corn, cultivated in hills, two acres were selected and marked off as nearly equal as possible, even to counting of vacant hills. The corn from one acre was ensiloed in September, when the grain was just beginning to glaze, and the next week the crop was cut on the other acre, field cured, and later it was stored under cover, the corn being husked. The crop from one acre weighed 18,910 pounds when put into the silo, nine and one-half tons of ensilage. The harvested crop of the other acre consisted of 3,027 pounds of corn (ears) and 2,982 pounds of stalks, or three tons of dry food. Half the product of each acre was fed to a cow selected for the purpose, the two cows being as evenly matched as possible. The one receiving ensilage was given all she would eat for a week, and the daily allowance, based on the trial, then regulated so as to average seventy-four pounds per day until the supply was exhausted. The half acre crop, as ensilage, lasted 126 days. The other cow was given a fixed daily ration of twelve pounds each of cut stalks and cob meal. The half-acre crop lasted 124 days. There was no more waste in the one case than in the other. Both cows fell off rapidly in their milk, although the one on dry feed did rather the better. Their milk record is regarded as of no value experimentally, since individual peculiarities might account for all the difference. When but one animal is thus used the margin for error is too wide to make any close comparisons. The crop was a light one — twice as much ensilage might be produced on an acre — but the stalks and corn might also be doubled. Taking the equal acres as they stood, their products, preserved in different ways, lasted equally well. Neither cow was fed well enough for an animal in milk. What each one received per day, and what they ought to have had, according to chemical examinations of the food, the following table exhibits:

FOOD ELEMENTS.	Dry food. lbs.	Protein. lbs.	Fat. lbs.	Nitrogen free ext. crude fibre and ash. lbs.
In a standard ration..............	21.50	2.250	.500	11.25 N. F. ext.
In 74 lbs. corn ensilage..........	17.95	1.362	.575	13.35 N. F. ext.
In 12 lbs. each stalks and cob meal,	19.34	1.438	.526	16.83 N. F. ext.

The dry ration appears to have had rather greater nutritive value than the other, yet the difference may have been made up by greater digestibility in the succulent material.

II. To test the effect of keeping a milch cow upon corn ensilage alone.

"Browney," a fair average cow, was selected from a milking herd of fifty "natives." She was five and a half years old, weighed 847 pounds, and had given about ten quarts of milk a day, with her last calf. She was dried off in October, and kept on hay alone until calving. That occurred on the 1st day of January, 1882, and from that time she was fed nothing but corn ensilage for a period of sixty-five days. The ensilage was the same as described in the last case, field corn. After several days' trial, sixty-four pounds was the quantity which it was found she would eat up clean daily. During the nine weeks the cow was on this diet her milk yield was thirteen pounds eight ounces per day average, and rapidly declining after the fifty-fifth day. For the next thirty days she was given the same ration of sixty-four pounds ensilage, and, in addition, daily, five pounds of grain, viz.: two pounds corn-meal, two pounds wheat-bran, and one pound cotton-seed meal. The milk yield of the cow averaged during this month seventeen pounds three ounces per day. Here was a daily gain of two quarts of milk, at a cost of seven cents for the grain. The month of April having arrived, it was desired to try a change to dry food before the pasturage season, so the ensilage was gradually replaced with dry forage. A ration of twelve pounds cut corn stalks and five pounds cut hay was substituted for the sixty-four pounds ensilage, with the same grain as in March. After the change had been fully made, the milk record was kept thirty days more, and the average yield was eighteen pounds; on the last day, eighteen pounds four ounces. The ensilage ration cost seven cents, and the dry forage which replaced it a trifle over nine cents. The advance of the season may have had a slightly favorable effect upon the milk yield, but the cow was in a warm basement stable, where the weather could not have had much influence.

Upon being turned on to grass in May her product never reached nineteen pounds per day. During the four months' trial this cow had no exercise, and her drink, as well as the food, was weighed, and the amount consumed recorded. While fed on ensilage alone she seldom drank oftener than once in two days, and averaged for sixty-five days nineteen pounds of water daily (there were forty-six pounds more in her daily food). The water consumed increased to twenty-one pounds a day when the five pounds of dry grain were added, and to sixty-nine pounds a day after the entire change to dry food. The cow maintained a very even weight during the trial, ranging from 840 to 862 pounds. While receiving ensilage alone, an examination of the milk showed 14½ per cent cream volume, 3.85 per cent of fat, and 12.67 per cent total solids; this is above the standard for solids and below for fat. The milk had, when fresh, a strong odor, plainly resembling that of the ensilage when taken from the silo, and a decided alcoholic flavor. One person who tasted it when warm, not knowing its source, mistook it for a milk-punch, and said it was very good, but needed a little more sugar and had not quite liquor enough in it! This taste and smell was very slightly perceptible in the cream, disappeared entirely when the latter became acid, and nothing unpleasant or peculiar could be detected in the butter. On the contrary, the butter was much better in color and flavor than usual on dry winter diet, more resembling that from early spring pasturage; it required twenty-six pounds of this ensilage milk to make a pound of butter; this in February; when, in April, the cow had only dry food, the butter lost its color and pleasant spring flavor, although at that time one pound could be made from twenty-three pounds of milk.

In this trial, the best of ensilage was insufficient, used alone, to maintain the flow of a new milch-cow ; grain was added at a profit, and a change to dry forage increased the milk yield, but at a cost of over five cents per quart for the milk gained. The same amount of milk on ensilage and grain, and on dry forage, showed a saving in favor of the former of fifty cents a month in the cost of feeding the cow.

III. A trial of corn-ensilage as the principal food of dairy cows, compared with the usual dry winter diet, mainly corn fodder.

Two sets of Jersey cows, eight animals in each, were selected from a milking herd, the greatest care being to match the animals, two and two, rather than collectively, as to breeding, age, weight, time of calving, period in calf, appetite and milking qualities. The daily record of all for more than a year previous was accessible. During the trial there was cause for dropping two of the animals from the test, and their mates were also removed, so that the final record is that of six pairs of cows. Every effort was thus made to remove the liability to error arising from individual peculiarities, a very important point in connection with any feeding experiment. These twelve cows were fed and treated alike for a fortnight prior to beginning the record, and then for twelve weeks their treatment was exactly the same, except that one set of six (lot A) received only corn ensilage, besides grain, while the other set (lot B) had dry forage only. The uniform grain ration was a mixture of four pounds of corn meal, four pounds wheat bran and one and one-half pounds cotton-seed meal, fed in two portions. Lot A received sixty pounds ensilage per day, it being of average quality as per analysis given hereafter, and lot B received twelve pounds of cut stover and five pounds cut meadow hay per head daily. The coarse forage in both cases was fed in two portions, one separate from the grain, while at the other time these were mixed. The following is the milk record of the two lots for the twelve weeks' trial:

SIX COWS. JERSEYS.	Milk per week at beginning of trial.		Milk per week at close of the trial.		Total weight of milk produced in 12 weeks.		Average milk product per week.		Average, 12 weeks, per day and per cow.	
	lbs.	oz.	lbs.	oz.	lbs.	oz.	lbs.	oz.	lbs.	oz.
Lot A, ensilage..........	825	2	731	12	9,295	9	774	10	18	7
Lot B, dry feed..........	816	6	722	14	9,375	5	781	8	18	10

The periodic loss or shrinkage of milk for every division of four weeks, comparing the quantity on the first and last days of these divisions, was as follows (gains marked + and losses —) :

COWS.	January.	February.	March.	Total, 12 weeks.
	lbs. oz.	lbs. oz.	lbs. oz.	lbs. oz.
Lot A	—60 2	— 8 3	—25 0	93 5
Lot B	+ 1 0	—24 9	—70 6	93 15

As to the quality of the milk from the two lots, these facts were ascertained, the figures being averages of the chemical and practical tests :

SIX COWS. JERSEYS.	Specific gravity of milk.	Total solids in 100 lbs. of milk.	Fat in 100 lbs. of milk.	Cream volume. Per cent of milk.	Milk required for 1 lb. of butter.
		lbs.	lbs.		lbs.
Lot A	1032	14.16	3.95	20½	22.9
Lot B	1029	13.81	3.93	18	20.2

The butter from the milk of the ensilage-fed cows was decidedly better, both in color and flavor, than that from the other lot.

In April the ensilage was discontinued and lot A put on entirely dry feed, the same as lot B. Then, after one week's intermission, the two were compared for four weeks more with this result :

Lot A, 687 lbs. 0 oz. milk per week, or 16 lbs. 6 oz. per day and cow.

Lot B, 702 lbs. 2 oz. milk per week, or 16 lbs. 11 oz. per day and cow.

Tracing this trial all through, it is seen that the results in quantity of product are slightly in favor of the dry-fed cows. But this is offset by the better quality of the butter as well as the more thrifty and healthful appearance of the animals fed on ensilage. The differences are so small, however, as to come within the limit of error, and the trial may fairly be pronounced a drawn game.

These trials, with other comparisons, chemical and practical, tend to show that the nutritive value, digestibility, waste in feeding and result at the pail, are substantially alike in equal quantities of corn, whether cured as fodder or as ensilage. These results, being verified, reduce the whole problem to one of convenience and economy in the method of curing, storing and feeding out the forage crops. With the exception of the labor of feeding, the advantages appear to be on the side of ensilage, when judiciously managed and under favorable conditions. Enough so to recommend silos, if additional storage be needed, instead of more barns; but not the abandonment of good barns and the construction of silos in their place.

The chemistry of the silo is still much in the dark. It is not known why ensilage from different silos varies so much, nor just what the course of chemical change is which occurs in the process, nor the full effects upon the food value of the material. Opinions among those to whom people naturally look for the facts, range from the claim that the ensilage of any given plant is a better food than the same dried, or even in the growing state, to the assertion of considerable losses in nutritive value through fermentation. There is evident need of further investigation, carefully conducted.

The great variation in the chemical composition of corn ensilage is shown by the following results of numerous analyses :

PARTS IN ONE HUNDRED POUNDS.	Water.	Protein.	Fat.	Nitrogen-free extract.	Crude fibre.	Ash.
Maximum	84.9	1.9	.9	13.4	7.9	1.4
Minimum	74.1	.9	.3	7	4.7	1
Average	81.4	1.3	.6	9.6	5.9	1.2

The degree and nature of the acidity developed and the means of controlling the same are points of especial interest and importance. That free acid exists in ensilage, usually in considerable quantity, is agreed. But is it acetic acid or lactic? This becomes a particularly interesting question when ensilage is used with dairy stock. It makes a vast difference whether a milk-producing animal is fed upon saurkraut or pickles. Prof. S. W. Johnson, of the Connecticut Agricultural Experiment Station (report for 1881, p. 89), gives an average of 3.69 per cent of free acid in samples of ensilage analyzed by him, and classes it as acetic. This being the case, an animal eating 110 pounds of such ensilage (a ration advocated by some), consumes two quarts of the strongest vinegar acid in a day, and a milch cow fed fifty or sixty pounds of ensilage is given at least one quart. This is hardly an ideal diet for the purpose of producing " food for babes."

With such knowledge of silos and ensilage as is available in America up to the present time the reasonable conclusions upon the subject are as follows :

First. That one or more silos of moderate size are convenient and economical on almost any farm, to preserve green any forage crop which circumstances prevent curing, or some crop specially grown to supply succulent food in the winter.

Second. That such silos may be built with much less expense than has been generally supposed, and that upon their location and arrangement the economy of their use very largely depends.

Third. That this system of storing forage may be pursued almost regardless of weather, and usually may be arranged so that the chief labor comes at a time when other farm work is not particularly pressing.

Fourth. That with proper care the process of ensiloing will preserve green forage substantially unimpaired as food, but with a probable increase in the percentage of protein and more or less loss in the carbhydrates.

Fifth. That as cattle food ensilage forms a good and cheap substitute for roots; but the crops generally used fail to fill the place of the root crop in a judicious farm rotation.

Sixth. That in feeding ensilage the best results follow a moderate ration rather than its entire substitution for dry coarse fodder.

Seventh. That the most marked result in ensilage feeding is the general condition and health of the animals, just as in the case of any succulent food.

And (*Eighth.*) That the extensive use of ensilage upon any farm is mainly a question of convenience and economy dependent upon the local conditions.

AN INDICTMENT OF SOME OF OUR FARM IMPLEMENTS.

A PAPER READ AT THE ANNUAL MEETING, JANUARY 17, 1883.

By James L. Ingalsbe, of Washington County.

I recognize one great need of agriculturists — an implement for the initial cultivation of the soil. In plain terms, I am not satisfied with any. form of plow as now made or used. Its operation is too slow — too wasteful of power, and two barren of results.

An acre a day means, in this latitude, only one stirring of the soil before putting in the seed. An acre of average sod land turned in the ordinary time and manner, as a mechanical result, is represented by one-seventh of one horse-power ; the result of the operation is a very little of what we desire, and a great deal of what we do not want at all. With great hesitancy, standing here to advocate strange doctrines, I beg to say I have waited long, hoping to hear the truth from some abler person, whose words might carry greater weight of influence, and that even after giving you a hint of my heresy, I scarcely dare to present my principal indictment of the plow.

In all these northern States the breed of horses now deemed applicable to road traffic and pleasure-driving are too light for effective service at the plow ; most of the heavier breeds, as well as oxen, move too slowly to accomplish a satisfactory day's work in plowing. The quick moving team, when meeting a firm obstruction, bruise and discourage themselves and the plowman ; damage or break the plow or tackle ; and fail to do good work. The slow team, more satisfactory in some respects, consumes too much time in stops and starting, giving a better show of quality, but failing in quantity of work performed.

Upon every stone or rock fairly met the full power of the team with the accumulated momentum comes to either dull or break the *only* cutting edge of the plow, to replace which costs from one half dollar upward, and of which, when one-twentieth part be worn away, the remainder is only valuable as scrap iron at the foundry.

Swivel plows have not been generally introduced upon level land, consequently dead furrows lessen the crop and are quite objectionable in the subsequent cultivation and harvest.

By the swivel system hillsides, fenced and plowed by themselves, in time become barren at the top, while a four foot wall at the foot has become a terrace.

Acknowledging the good wrought in time past by the plow, I ask for a different tool. A tool presenting not one, but several cutting points, cheaply replaced when worn or broken, a tool not specially made as an *anchor* for the team, but which, of its own action, will pass any ordinary obstruction without stoppage or break, working the soil to a reasonable depth, and *twelve* to *twenty* inches in width for each pair of horses, or their equivalent, employed, running upon wheels with a seat for the driver, and leaving the pulverized soil directly in its rear.

With such an implement I should hope to see, even on our stony stubborn soils, teams of three or four horses or oxen driven by one man over two to five acres per day, rendering possible a better system of cultivation consisting of at least *two* thorough workings of the soil exclusive of the surface working before committing the seed.

Why or for what purpose do we invert the soil? To bury weeds? Why bury them? To promote decay? Certainly not — in turning sod we create a miniature silo, and thus *arrest* decay. The elements and agencies of decay are at the surface. A fence post may be nearly severed at the surface, yet at six or eight inches below apparently as sound as when set. *To bury the seeds of weeds?* Mistaken policy — let the germs of every foul weed vegetate at the earliest moment, watch it, tear it up when tender, leave it to the sun, the wind, the dew, to decay and thus furnish the best of food for a *better* plant.

Do we invert the soil to bury manure or fertilizing matter expecting the young and growing crop to be benefited thereby? Then as a fitting supplement let us place a pen of sucking calves, a litter of choicest pigs and a coop of chickens on one side of a wall of plank, with their necessary and appropriate food upon the other side and leave the tender stock to shift as best it may, till grown sufficiently strong to open the way to dinner.

In the beautiful and harmonious economy of nature does not all fertilizing matter fall upon the surface? Does not the tender seed fall *accompanied, covered* and *protected* by leaves, feathery fronds and delicate vegetable fibre, which by its presence guards the plant in its infancy, retains the moisture and shields it from the scorching sun, by decay furnishing food for its growth?

We in our vaunted wisdom, when nature, by the processes of decay, the capillary action of roots, the boring and excretion of earth worms, frost and chemical action, has rendered a few inches of the surface rich in assimilable plant food, must needs to show our skill and workmanship, turn it smoothly under, and commit our seed to a freshly turned sub-soil containing perhaps plenty of mineral, but practically *no* vegetable matter for its support.

The tender wood plant sleeps safely through the winter beneath the snow, its roots scarcely touched of frost, by reason of the nonconducting power of air pervading its mossy fibrous covering.

The wheat or clover plant under the enlightened agricultural system of the latter decades of the nineteenth century, spends the winter clinging to the hard icy surface of a soil utterly at variance with its requirements, wind swept, alternately frozen and thawed, and in spring the farmer bewails the failure of a "catch."

I ask for an implement that shall pulverize the soil without inversion, leaving the finer vegetable soil with the stems, roots, leaves, etc., of grass and weeds in their proper place, at the surface, where they may best be dealt with to their destruction, and decay, fulfilling the purpose intended, the protection of plants and the *retention of moisture.*

It is at least an open question whether we have not by the vast area of denuded, sun-baked, wind dried earth annually turned up to the surface, materially assisted in bringing about some of the deplorable climatic extremes of common occurrence.

I ask also for an implement for *surface* cultivation at seeding time, which shall agitate, pulverize and toss up the surface soil, allowing the finer and lighter particles to occupy the surface, covered evenly and lightly with whatever of a fibrous nature may be present at the time, and *not* after the manner of ordinary drag harrows as now constructed, when put to work in a field where a *proper* seed bed has been preserved, becoming a *two-horse swab* or *scrubbing brush*, scraping the vegetable covering and with it the seed, into rolls or winrows, leaving large areas correspondingly bare of both.

Our plows are only more elegant editions of their prototype the crotched stick of the ancients, they *invert* more perfectly, but pulverize less; our harrows, save perhaps the class of the rotating disks with their mammoth congener the Chicago Screw Pulverizer, are essentially but the scraggy tree top or bush drawn butt or top foremost, or sideways as the case may be.

After quite a considerable study and deliberation, with the assistance of the best available means of information, I am fully of the opinion, and were I in some other place than the hall of the New York State Agricultural Society, I would say the best plows now offered to the farmers of our State are unworthy relics of barbarism, and the accompanying drag harrows are their miserable foster brothers. Members of the society, if, in your judgment, this be heresy, I can devise no remedy. If there be none who has ever thus thought, or who will now, perchance, in part agree with me, then I have spoken unadvisedly and before my time. Do I know what I am talking about? or have I handled the tool I have so maligned? Are you passing through some agricultural district, and do you see a lonely plow drawn diagonally out from the end of the last furrow, lying flat on the land side and beam, one whiffletree pointing at full length toward the distant barn, the other back between the handles? Rest assured the tracks around that plow are not the impressions of *my* boot. Do you see by the fence on a distant steep hillside a team in the act of turning, the plowman hauling the swivel plow by the handles, out of the furrow, down the hill, and again up around the team, with the vim and clatter of a dog dragging a woodchuck from a stone-heap, the knot of the driving reins meanwhile about the driver's heels, the clevis unhooked from the beam, and a part, at least, of the traces from the whiffletrees, the horses alternating between nibbling grass and kicking each other — are you looking for me? You needn't go up there; that's somebody else. I have heard it said that lightning never strikes twice in a place. I know that a plow handle will.

Close upon forty years ago, when my hat at its normal altitude was not so far above a plow handle as it might be now, I remember finding abundant employment for two not very large or strong hands grasping the only handle of an old Wright plow, then in vogue in that section;

they were, I think, usually furnished with only one handle, and certainly the special one of which I speak, with a long wooden beam and no wheel, could with *one handle* do a sight of kicking. The plow did the rooting and I turned the sod, taking as best I might the pounding, day after day, till, past endurance, I started for the old family physician. With looks of wondrous wisdom, he poked his thumbs around among my ribs, totally regardless of my contortions, till I thought it about an even chance between him and the plow, and felt vastly relieved when he gave his verdict, "One broken, another cracked, that's all." "Any help for it, Doctor?" "No, no remedy; go home and prop it out with plenty of Indian pudding and milk."

On the hard, stony hillsides of my native county I wrestled at the plow tail for years, almost as an exclusive business through the agricultural season, and am not a novice with a genuine North Bend "Gulger," whose irons were freighted a couple of hundred miles by prairie schooner, to be wooded on the spot. Confessedly a dull scholar, I have had *abundant* tuition. This is an important subject, and one that may well engage our attention. Laying no claim to superior knowledge, I am only a patient investigator. Perhaps it is well that I say *here* that, twenty years ago, I left my chosen profession, government surveying and engineering, and returned to eastern farming. It occurred to me that in agricultural implements there was a great field for systematic investigations; that while improvements in detail were almost without number, radical improvements were comparatively unknown. While in other industries the methods were revolutionized, in *this* all seemed to follow the rut, or at least with only slight changes. I deliberately set myself the task to know somewhat of agricultural implements. I have spoken to-night of one. Am I all wrong? It is a fact that whoever essays to go beyond the schools must walk alone, and that all reforms begin by failure, so too may I fail, but let me go upon the record as one who saw and indicated the greatest need of agriculturists at this day. If these things are so, why has it not been found out before?

Turning memory backward, I see on a frosty October morning, out back of the old homestead barn, a little boy carrying pumpkins from the adjoining cornfield, and, one at a time, throwing them over into the barnyard among the motley crowd assembled. This method of feeding was like my present estimate of the plow, not commensurate with the occasion; and, withal, the boy seemed in no hurry, though the morning chores were all done; it was fully breakfast time, and this feeding business was of his own ordering. Let us, if you please, go back a little. A corn field lay next the yard; a rampant pumpkin vine had, during the summer, found its way through a hole almost at the top of a six-foot stone wall; then a yellow blossom, a green knob with a prodigious stem, and now a fair-sized yellow pumpkin hung suspended. The end of the vine below had been trodden to shreds; the cows at their daily milkings had rubbed against it.

Hanging directly over the pig trough, a dozen shoats had in frantic search of the last morsel of their daily food, time and again, snouted each other from end to end, almost in absolute contact, yet there it hung — *invisible.* The morning breeze, balmy with the odor of ripening corn, came in as the first glint of sunshine struck the field, and the brindled ox, driving the pigs from the trough, threw up his broad muzzle to the top of the wall, the brass knobs on his horns lying back on his shoulders, and as he filled his cavernous lungs with the scented air and again sent it in a cloud from his nostrils, almost like the exhaust of a locomotive, his fringed neck brushed the dew from what might have been his breakfast.

Clinging to the top rail of the fence and screaming with laughter the roguish boy had attracted the attention of other youngsters of the family who, in their hasty search for information, tripped against the supporting vine, not severing, but simply *disturbing* the vail of non-concealment. A game of foot ball ended the sport, but the memory of the farm yard incident has remained with the boy even to the present hour, and has caused him many times to interrogate himself thus. Gifted with intelligence and reasoning powers capable of endless development, why shall I be in many things as stupidly blind as those cattle?

I have said but little and the little has been poorly said. My only hope shall be that there may be some thinking of what I have not said.

In our researches after the unknown, with hound and horn we vex the distant hills, exploring far off valleys, rewarded only by moss grown footprints, while radiant glorious truth sits, tired with long waiting, at our door sills — seeking only admission.

THE NEED OF A BETTER SEED SUPPLY.

By E. LEWIS STURTEVANT, M. D., Director of the N. Y. State Agricultural Experiment Station.

Seeds are at the foundation of farming, and good seed of good farming. Since the modern discovery, entitled persistence of force, we are able to claim absolutely, and in accordance with science, what before might have been claimed from empirical observation and practical experience, that as we plant must we reap, that wheat seed yields wheat grain, maize seed maize grain, and that each seed produces yield absolutely of its kind. We may also claim with equal certainty, that all life, whether animal or vegetable, is subject to the law of heredity, a fact which may be recognized in various and varied disguises. Whether in the less known facts recorded under the terms alternation of generation, or retrogressive development, etc., or under the better known facts known as sports, hybrids, cross-breds, etc., in every case we find, when carefully studied, all to be but illustrations in apparent divergence of the generality of the final law of heredity, or that each life takes its direction from a preceding life according to law, and transmits the same life as modified by its own environment to its progeny.

In nature we find plants subjected to an environment which may be considered in some aspects as uniform — a constant struggle of the individual for supremacy; and hence those qualities which best fit for overcoming obstacles, or which are slightly favorable, give chances to the competitor for fulfilling the scheme of its life and for transmitting its advantages to a few of its progeny, which progeny in turn find destruction except for the few favored by circumstances and the inherited additional power. Where millions must necessarily perish in order that a few shall survive, the chances are that these few are more strongly developed in some direction useful to the perpetuation of the species than were those which succumbed. In the antagonisms of nature, produced by the struggle ever going on between the individuals seeking to occupy ground against innumerable competitors, opportunity and adaptiveness are the winning factors, and correlations between the uniformities of nature and the plant ultimately mould the plant into certain forms and proportions which enable intelligence to draw lines of demarcation which are defined by the words order, tribe, genera, species. In order to give an idea of this battle of plants, we shall state that the produce of seed from one square rod of garden soil, planted with "pusley," would, if planted out so that all should grow and flourish, supply, the next season, sufficient seed to furnish each square foot of earth on the globe with a plant. This startling deduction well illustrates the warrings which are a part of the scheme of nature, and which necessitate each plant to keep in rank with its fellows, sharing with its species the advantages already won. Lives directed by inflexible necessity have much in common; and, as in human lives, there is little opportunity, in the face of a constant struggle for existence, for the development of graces outside of what are useful. Certain conditions necessitate selfishness.

In the cultivated plant all is different. The intelligence of man steps in to protect, and the plant relieved of the necessity of constant struggle, begins to develop abeyant characters, which, so far as they add to its usefulness to its new keeper, are encouraged and protected, and a new force, *i. e.*, man's action, forces the changes brought about by a changed environment to modify the direction of the action of hereditary forces, not only by the removal of forces previously antagonistic, but also by the additional means now known under the general name of selection. Hence, as natural selection (uniformity of environment reacting with infinite numbers and attempts, where the vast number must perish) is productive of species, so human selection (variability of environment with protection of individuals) provides varieties. Thus species and varieties have in common the characteristics produced by circumstances of a common environment, and differ in those characteristics which are furnished by a changeable environment.

Speaking comparatively, species are the production of a simple environment, varieties of a more complex environment, and while the law of heredity remains equally constant, yet its manifestations become different as environmental forces become changed. Selection, or protecting the individual not only against adversaries, but as against itself, by gradually curbing the influencing powers which tend to carry the plant towards warring life, and by strengthening the protective forces which are favorable to the peaceful life, is the grand weapon which intelligence uses not only to subjugate the plant to a domesticated condition, but to secure the strengthening of the hereditary forces which it is desired to make subservient to our use or fancy. It will hence be seen that in accordance with the stability and intelligence of our action, varieties can be made to take on in a measure the fixedness of species, or can be made even more variable. It must be remembered, however, that that protection which removes from the plant the necessity of acting for its own preservation, is correlated with a certain effeminacy, just as a warlike population during generations of slavery loses the vigorous assertion of free days; just as those for whom thought, food and amusement are provided, in time lose capacity for caring for themselves and for enduring the hardships of an exposed life.

The seed is the favorite agency by means of which nature secures the perpetuation and distribution of a species. It is the concentrated plant, and carries within its coverings the heredity of the plant from which it has been derived. Our food seeds have become what they are through the agency of an environment controlled by men, and have become so changed as not to exist in their present form in a wild state. Wheat, rye, corn, oats, barley, etc., are not known in a natural state, but are a domesticated production, requiring domesticated conditions for their perpetuation under the form in which they now exist. The many minds of many men engaged in their production have produced many variations, and as heredity is a controlling force, productive alike for variation as for fixity, we have named varieties of all our cereals which differ in qualities even as between samples from various sources of supply, and yet each kind capable of being formed into permanency of habit. Our vegetable seeds, such as cabbages, cauliflowers, turnips, etc., etc., exist in their present varieties through the agency of man, and are as capable of being made into permanent varieties as they have been found capable of being made into such as they are. Their peculiarity is that their plant form has now ceased to be of protective advantage, and is dependent for fixity upon the action of man, who has domesticated their qualities for his own advantage, as against the advantage of the plant. Our fruit seeds also afford like illustration. A development of fruit for man's advantage as against the advantage of the plant, even to the extent of becoming seedless, and a quality such as the wild plant, having no use for this function, did not attain.

In view of these statements I think we may reasonably claim that our vegetable productions are artificial in their character ; are dependent upon man for their perpetuation, and, although not as fixed in their characteristics as botanical species, are yet sufficiently permanent, in the presence of the ability to select, to retain the qualities that we have gained. Let us then recognize these facts and demand for our use permanency of character, and recognize that according to the source from which our seeds are derived may be their goodness of quality. One of the practical difficulties which we often have to meet is the impossibility of securing what we know we ought to strive after. Seedsmen do not guarantee their seeds, and the result is, the purchaser who pays for the best often obtains different seeds from what he stipulates for. If we are correct, that varieties of cultivated plants need not, necessarily, vary far from their type, that is sufficiently far to escape identification, then it follows that the seeds purchased of seedsmen should be guaranteed as true to name and the seller be held liable for failure. Should this be established by law or custom, then fixity of type would be sought for by seed purveyors, and a corresponding advance would take place in our dealings with nature, and great improvement would result along our whole line of vegetable growths, as seedsmen would be compelled by the inexorable logic of trade to be men of ability as well as of probity, and mastering the best, there would always be a better beyond, toward which inclination and profit would point the effort for achievement.

Poor seeds are an annoyance and a loss to which all who purchase seed are subjected. The whole system of our seed supply should be changed, as containing inherent faults. At present I know of no source from whence seeds can be secured true to name and true to quality. Competition amongst our seedsmen has forced the effort to buy cheap, and cheap seed must in general mean unreliable seed. When the demand of the public shall force the competition of seedsmen into seeking who shall offer the best for sale, instead of who shall offer the cheapest, a new day will dawn upon us ; rays of promise will go out to encourage the farmer and gardener, and rills of increase combine from many a source to form the stream of agricultural product flowing toward a market, to return additional profits to the sender. Good seed in the hands of the good farmer is capable of turning a disastrous season into a successful one ; of changing losses into profits ; of bringing hope amidst discouragements. Good seed means vital seed ; fixity of type; fecundity of product; adaptiveness to locality. The last the user must secure ; the first three requirements it is among the duties of the distributer to furnish, and of the farmer to pay for.

ANALYSES OF FERTILIZERS.

The following samples of fertilizers have been analyzed by Mr. W. M. Habirshaw, F. C. S., chemist to the New York State Agricultural Society, for the society, during the year 1882:

No. 2. Acid phosphate, manufactured by Lister Bros., Newark, N. J.; sold, September 1, 1881, by James Doyle, Rochester, to H. C. Pratt, Canandaigua; sampled February 21.

No. 3. Ammoniated bone superphosphate, manufactured by L. L. Crocker, Buffalo; sold, February 28, by N. B. Atwater, Atwater, to Harvey Teeter, Lake Ridge; sampled March 6.

No. 4. No. 1 Peruvian guano, sold, February 27, by Seth Chapman's Son & Co., New York, to David C. Bennett, Bay Ridge; sampled March 6.

No. 5. Complete oat fertilizer, manufactured and, March 17, sold by H. J. Baker & Bro., New York, to C. H. Delamater, Northport; sampled March 24.

No. 6. Barren Island special potato fertilizer, manufactured and, March 8, sold by P. White's Sons, New York, to Townsend C. Van Pelt, New Utrecht; sampled March 27.

No. 7. Complete potato manure, manufactured and, March 17, sold by H. J. Baker & Bro., New York, to Richard D. Berry, Flatbush; sampled March 31.

No. 8. Pacific soluble guano, manufactured by Pacific Guano Co., Boston, Mass.; sold, March 2, by Vanderbilt Bros., New York, to David C. Bennett, Bay Ridge; sampled March 24.

No. 9. No. 1 potato fertilizer, manufactured by —— Coe, Barren Island; sold, March 14, by Simon Lott, Flatlands, to James S. Voorhies, Gravesend; sampled March 28.

No. 10. Forrester's potato fertilizer, manufactured and, March 3, sold by George B. Forrester & Co., New York, to P. W. Remsen, Flatbush; sampled March 25.

No. 11. Ammoniated dissolved bone, manufactured by Farmers' Fertilizer Co., Syracuse; sold, March 20, by Dwight K. Foster, Syracuse, to Owasco Grange, Skaneateles; sampled April 17.

No. 12. Standard Peruvian guano, sold, April 20, by J. E. Wells, Riverhead, to Frank O. Luce, Aquebogue; sampled April 21.

No. 13. Ammoniated bone phosphate, manufactured by H. Preston & Son, Greenpoint; sold, April 15, by J. E. Webb, Cutchogue, to B. F. Griffin, Jamesport; sampled April 21.

No. 14. Potato fertilizer, manufactured by the Mapes Formula and Guano Co., New York; sold, April 16, by Alfred Burt, Mattituck, to F. C. Turner, Jamesport; sampled April 21.

No. 15. German potash salt, sold, April 1, by Gildersleeve Bros., Mattituck, to C. H. Hudson, Jamesport; sampled April 21.

No. 16. Fish and potash, manufactured by the Quinnipiac Co., New London, Conn.; sold, April 18, by Corwin & Vail, Riverhead, to G. C. Hallock, Jamesport; sampled April 21.

No. 17. Sulphate of ammonia, manufactured (?) by the Mapes Formula and Guano Co., New York; sold in February by Alfred Burt, Mattituck, to Elisha Aldrich & Sons, Mattituck; sampled April 19.

No. 18. Honest fertilizer, manufactured and, in March, sold by L. L. Crocker, Buffalo, to H. F. Luce, Riverhead; sampled April 21.

No. 19. Potato fertilizer, manufactured by Williams, Clark & Co., New York; sold, March 31, by J. E. Phelps, Jamesport, to G. M. Terry, Aquebogue; sampled April 22.

No. 20. Bone, manufactured by H. Preston & Son, Greenpoint; sold, April 7, by B. E. Webb, Cutchogue, to G. M. Terry, Aquebogue; sampled April 21.

No. 21. Complete potato fertilizer, manufactured by H. J. Baker & Bro., New York; sold, March 30, by J. E. Wells, Riverhead, to O. F. Wells, Aquebogue; sampled April 8.

No. 22. Farmers' promoter, manufactured and, March 24, sold by J. Boynton, New York, to V. R. Terry, Aquebogue; sampled April 19.

No. 23. Bonedust, manufactured and, March 1, sold by Peter Cooper Glue Factory, New York, to Elisha Aldrich & Sons, Mattituck; sampled April 19.

No. 24. Rotted bone, manufactured by George W. Baker, Williamsburgh; sold, April 7, by Griffin & Tuthill, Riverhead, to J. T. Downs, Riverhead; sampled April 20.

No. 25. Ammoniated superphosphate, manufactured by H. J. Baker & Bro., New York; sold, March 30, by J. E. Wells, Riverhead, to O. F. Wells, Aquebogue; sampled April 19.

No. 26. Muriate of potash, sold, April 12, by Gildersleeve Bros., Mattituck, to H. L. Hallock, Jamesport; sampled April 19.

No. 27. Barren Island potato fertilizer, manufactured by P. White & Sons, New York; sold, April 5, by John C. Wells, Mattituck, to O. F Wells, Aquebogue; sampled April 15.

No. 28. Guano substitute, manufactured by P. White & Sons, New York; sold, April 11, by John T. Hallock, Riverhead, to A. T. Downs, Riverhead; sampled April 19.

No. 29. Complete potato fertilizer, manufactured by G. B. Forrester, New York; sold, April 1, by J. M. Petley, Jamesport, to John A. Reeve, Riverhead; sampled April 21.

No. 30. Guaranteed Peruvian guano, sold, March 20, by Seth Chapman, Son & Co., New York, to H. L. Hallock, Riverhead; sampled April 19.

No. 31. Cook's blood guano, sold, April 13, by F. B. Lippitt, Solsville, to Arthur Lewis, Solsville; sampled April 13.

No. 32. Canada ashes, sold, April 7, by J. E. Wells, Riverhead, to J. Y. Downs, Riverhead; sampled April 22.

No. 33. Stockbridge potato fertilizer, manufactured by Bowker Fertilizer Co., New York; sold, March 20, by Gildersleeve Brothers, Mattituck, to Z. Hallock, Jamesport; sampled April 20.

No. 34. Corn fertilizer, manufactured and, April 5, sold by H. J. Baker & Bro., New York, to C. H. Delamater, Northport; sampled April 28.

No. 35.* Bone, manufactured and, April 5, sold by H. J. Baker & Bro., New York, to C. H. Delamater, Northport; sampled April 28.

No. 36. Potato fertilizer, manufactured and, April 5, sold by H. J. Baker & Bro., New York, to C. H. Delamater, Northport; sampled April 28.

No. 37. Ground bone, manufactured and, March 30, sold by H. J. Baker & Bro., New York, to C. H. Delamater, Northport; sampled May 8.

No. 38. Mapes' potato fertilizer, manufactured and sold by the Mapes Formula and Guano Co., New York, to B. S. Winne, Cedar Hill; sampled May 14.

No. 39. Excelsior fertilizer, manufactured by Frank E. Coe, New York; sold, May 25, by John B. Hopkins, Jamaica, to Charles Strang, Jamaica; sampled May 29.

No. 40. Dissolved bone, manufactured by Farmers' Fertilizer Co., Syracuse; sold, September 1, by James Peck, Skaneateles, to Owasco Grange, Skaneateles; sampled September 14.

No. 41. Canada ashes, sold, in September, by C. D. Smith, Greenlawn, to John Duryea, Hempstead; sampled October 19.

Nos. 42 and 43. Acorn Brand dissolved bone black, manufactured and sold, August 31 and September 6, by Williams, Clark & Co., New York, to H. H. Treat, Auburn; sampled October 24.

No. 44. Syracuse Standard ammoniated bone phospate, manufactured by Farmers' Fertilizer Co., Syracuse; sold, September 1, by Giles & Searing, Poplar Ridge, to Elisha Cook, Poplar Ridge; sampled November 27.

The above descriptions are given as received by the society. The prices stated to have been paid, and the results of the analyses, excepting for Nos. 32 and 41, are given in the following table:

The following prices for nitrogen, phosphoric acid and potash in commercial fertilizers were agreed upon as TRADE VALUES FOR 1882, by Professor S. W. Johnson, of the Connecticut Experiment Station; C. A. Goessman, State Agricultural Chemist of Massachusetts; and G. H. Cook, of the New Jersey Agricultural Experiment Station, at a meeting held in January, 1882:

	Price, cts. per lb.
Nitrogen in nitrates	26
Nitrogen in ammonia salts	29
Nitrogen in Peruvian guano, fine steamed bone, dried and fine ground blood, meat and fish, superphosphates and special manures	24
Nitrogen in coarse or moist blood, meat, or tankage, in cotton seed, linseed and castor pomace	18

---

* Sample 35 was so designated in the ticket accompanying the sample, but the analysis shows that it was a superphospate.

	Price, cts. per lb.
Nitrogen in fine ground bone, horn and wool dust	17
Nitrogen in fine medium bone	15
Nitrogen in coarse medium bone	13
Nitrogen in coarse bone, horn shavings, hair and fish scrap	11
Phosphoric acid soluble in water	12½
Phosphoric acid reverted, and in Peruvian guano	9
Phosphoric acid insoluble, in fine bone, fish guano and superphosphates	6
Phosphoric acid insoluble, in fine medium bone	5½
Phosphoric acid insoluble, in coarse medium bone	4½
Phosphoric acid insoluble, in coarse bone, bone ash and bone black,	4
Phosphoric acid insoluble, in fine ground rock phosphates	3
Potash, in high grade sulphate	7
Potash, in low grade sulphate and kainite	5
Potash, in muriate, or potassium chloride	5

These values have not been adopted in making up the following table. Some of the reasons for not doing so will be found in the report of the executive committee. One additional reason is that the course of the fertilizer market during the year showed that these prices, adopted at the beginning of the year, were too high. Professor Johnson writes, February 14, 1883, that the actual retail prices during the year were, for nitrogen in nitrates, three cents, and for organic nitrogen two cents per pound lower than the above estimated prices, and for soluble phosphoric acid one cent per pound lower. Another and practically conclusive reason, is that in the analyses tabulated the soluble and reverted phosphoric acid are generally stated together under the designation of *available phosphoric acid.* The chemist of the society, Mr. Habirshaw, is not responsible for the valuations given in the table, the prices having been assumed and the calculations made by the secretary.

The table on page 55, showing the variations in the price of sundry fertilizing materials, was prepared by Mr. C. A. Hutchinson, B. S., one of the chemists of the Connecticut Experiment Station, and is printed in the station report of 1882. It is reprinted in this report, for the sake of further illustrating the difficulties attending the valuation of commercial fertilizers, as well as for its own instructive value.

This subject has been very fully and lucidly treated of by Professor Johnson, director of the Connecticut Agricultural Experiment Station, in the annual station reports. The station report for 1882 contains the following, reprinted in this report by permission of the author.

EXPLANATIONS OF FERTILIZER.—ANALYSIS AND VALUATION.

By Professor S. W. JOHNSON.

Nitrogen is commercially the most valuable fertilizing element. It occurs in various forms or states. *Organic nitrogen* is the nitrogen of animal and vegetable matters generally, existing in the albumen and fibres of meat and blood, in the uric acid of bird dung, in the urea and hippuric acid of urine, and in a number of other substances. Some forms of organic nitrogen, as that of blood and meat, are highly active as fertilizers; others, as that of hair or leather, are comparatively slow in their effect on vegetation, unless these matters are reduced to a fine powder or chemically disintegrated. *Ammonia* and *nitric acid* are results of the alteration of *organic nitrogen* in the soil and manure heap, and are the most active forms of nitrogen. They occur in commerce, the former in sulphate of ammonia, the latter in nitrate of soda.

Seventeen parts of ammonia, or sixty-six parts of pure sulphate of ammonia contain fourteen parts of nitrogen.

Eighty-five parts of pure nitrate of soda also contain fourteen parts of nitrogen.

Soluble phosphoric acid implies phosphoric acid or phosphates that are freely soluble in water. It is the characteristic ingredient of superphosphates, in which it is produced by acting on insoluble or "reverted" phosphates with oil of vitriol. It is not only readily taken up by plants, but is distributed through the soil by rains. Once well incorporated with soil it shortly becomes reverted phosphoric acid.

Reverted (*reduced* or *precipitated*) *phosphoric acid* strictly means phosphoric acid that was once freely soluble in water, but from chemical change has become insoluble in that liquid. It is freely taken up by a strong solution of ammonium citrate, which is therefore used in analysis to determine its quantity. "Reverted phosphoric acid" implies phosphates that are readily assimilated by crops, but generally have less value than soluble phosphoric acid, because they do not distribute freely by rain.

Insoluble phosphoric acid implies various phosphates not freely soluble in water or ammonium citrate. In some cases the phosphoric acid is too insoluble to be rapidly available as plant food. This is true of South Carolina rock phosphate, of Navassa phosphate, and especially of Canada apatite. The phosphate of coarse raw bones is at first nearly insoluble in this sense, because of the animal matter of the bone which envelopes it, but when the latter decays in the soil, the phosphate remains in essentially the "reverted" form.

Potash signifies the substance known in chemistry as potassium oxide which is the valuable fertilizing ingredient of "potashes" and "potash salts." It is most costly in the form of sulphate, and cheapest in the shape of muriate or chloride.

The valuation of a fertilizer signifies, estimating its worth in money, or its trade value, a value which it should be remembered is not *necessarily* proportional to its fertilizing effects in any special case.

Plaster, lime, stable manure and nearly all the less expensive fertilizers have variable prices which bear no close relation to their chemical composition, but guanos, superphosphates and other fertilizers for which thirty dollars to eighty dollars per ton are paid, depend chiefly for their trade value on the three substances, *nitrogen*, *phosphoric acid* and *potash* which are comparatively costly and steady in price. The money value per pound of these ingredients is easily estimated from the market prices of the standard articles which furnish them to commerce.

These "*trade values*"[*] *of the elements of fertilizers* are not fixed but vary with the state of the market, and are from time to time subject to revision. They are not exact to the cent or its fraction, because the same article sells cheaper at commercial or manufacturing centres than in country towns, cheaper in large lots than in small, cheaper for cash than on time. These values are high enough to do no injustice to the dealer, and properly interpreted are accurate enough to serve the object of the consumer.

To *estimate the value of a fertilizer* we multiply the per cent of nitrogen, etc., by the trade value per pound, and that product by twenty; we thus get the values per ton of the several ingredients, and adding them together we obtain the total estimated value per ton.

In case of *ground bone*[†] the fineness of the sample is graded by sifting, and we separately compute the nitrogen value of each grade of bone which the sample contains, by multiplying the pounds of nitrogen put on in the sample by the per cent of each grade, taking one one-hundredth of that product, multiplying it by the estimated value per pound of nitrogen in that grade, and taking this final product as the result in cents. Summing up the separate values of each grade thus obtained together with the values of each grade for phosphoric acid similarly computed, the total is the estimated value of the sample of bone.

The uses of the "valuation" are, 1, to show whether a given lot or brand of fertilizer is worth, as a commodity of trade, what it costs. If the selling price is no higher than the estimated value, the purchaser may be quite sure that the price is reasonable. If the selling price is but two dollars to three dollars per ton more than the estimated value it may still be a fair price; but if the cost per ton is five dollars, or more, over the estimated value it would be well to look further.

2. Comparisons of the estimated values and selling prices of a number of fertilizers will generally indicate fairly which is the best for the money. But the "estimated value" is not to be too literally construed, for analysis cannot always decide accurately what is the *form* of nitrogen, etc., while the mechanical condition of a fertilizer is an item whose influence cannot always be rightly expressed or appreciated.

The agricultural value of a fertilizer is measured by the benefit received from its use, and depends upon its fertilizing effect or crop-producing power. As a broad general rule it is true that Peruvian guano, superphosphates, fish scrap, dried blood, potash salts, plaster, etc., have a high agricultural value which is related to their trade value, and to a degree determines the latter value. But the rule has many exceptions and in particular instances the trade value cannot always be expected to fix or even to indicate the agricultural value. Fertilizing effect depends largely upon soil, crop and weather, and as these vary from place to place and from year to year, it cannot be foretold or estimated except by the results of past experience and then only in a general and probable manner.

For the above first-named purpose of valuation, the trade values of the fertilizing elements which are employed in the computations should be as exact as possible and should be frequently corrected to follow the changes of the market.

---

[*] See schedule printed on pages 48-9, *ante*.

[†] This has not been done for the fertilizers analyzed for this Society.

For the second-named use of valuation, frequent changes of the trade values are disadvantageous, because two fertilizers cannot be compared as to their relative money-worth, when their valuations are estimated from different data.

Experience leads to the conclusion that the trade values adopted at the beginning of a year should be adhered to as nearly as possible throughout the year, notice being taken of considerable changes in the market, in order that due allowance may be made therefor.

It should be remembered that in an annual report the fluctuations in trade-value that may occur within the year cannot be accurately followed, and the comparisons of estimated values are mostly in retrospect.

TABLE giving the results of the ANALYSES *of forty samples of* COMMERCIAL FERTILIZERS *analyzed during the year 1882, for the society, by* WILLIAM M. HABIRSHAW, F. C. S., *chemist to the society, chemist to the Chemical Trade of New York, and analyst to the New York Produce Exchange, with valuations by the secretary.* For particular descriptions of the articles, see pages 46–8.

Office number of sample.	DESIGNATION OF SAMPLE.	Per cent of water evaporated at 100° C (same as 212° Fahrenheit).	Per cent of total nitrogen in sample.	Valuation of nitrogen in sample at twenty-four cents per pound.	Per cent of available phosphoric acid in sample.	Valuation of available phosphoric acid in sample at ten cents per pound.	Per cent of insoluble phosphoric acid in sample.	Valuation of insoluble phosphoric in sample at four and a half cents per pound.	Potash (potassium oxide) in sample.	Valuation of potash in sample at four and a half cents per pound.	Total sum of preceding valuations.	Price per ton (2,000 lbs.) at which the fertilizer is stated to have been bought.
2	Lister's acid phosphate	13	......	......	15.01	$30 02	3.09	$2 78	......	......	$32 80	$28 50
3	Crocker's ammoniated bone superphosphate	14.15	2.60	$12 48	5.62	11 24	5.73	5 16	.84	76	29 64	34 00
4	No. 1. Peruvian guano	12.75	8.00	38 40	3.39	6 78	10.36	9 32	2.37	$2 13	56 63	68 00
5	Baker's oat fertilizer	14.25	2.87	13 77	5.33	10 66	.65	58	7.64	6 88	31 89	50 00
6	Barren Island potato fertilizer	21.50	2.86	13 72	7.37	14 74	.86	77	2.23	2 01	31 24	40 00
7	Baker's potato manure	11.30	3.42	16 41	5.10	10 20	Trace.	......	9.31	8 38	34 99	50 00
8	Pacific soluble guano	13.00	2.10	10 08	11.65	23 30	1.04	94	1.61	1 45	35 77	48 00
9	Coe's No. 1 potato fertilizer	14.40	2.11	10 12	10.81	21 62	2.12	1 90	.46	41	34 05	32 00
10	Forrester's potato fertilizer	9.35	3.85	18 48	5.61	11 22	.18	16	9.59	8 63	38 49	50 00
11	Farmers' Fert. Co.'s ammoniated dissolved bone,	16.40	1.06	5 09	11.13	22 26	2.06	1 85	......	......	29 20	28 50
12	Standard Peruvian guano	12.05	7.58	36 38	......	......	*14.09	12 68	2.54	......	51 35	64 00
13	Preston's ammoniated bone phosphate	15.35	2.22	10 66	8.19	16 38	3.47	3 12	.17	15	30 31	36 00
14	Mapes Co.'s potato fertilizer	13.95	3.15	15 12	6.02	12 04	1.97	1 77	7.91	7 12	36 05	52 00
15	German potash salt	......	......	......	......	......	......	......	13.26	11 93	11 93	12 00
16	Quinnipiac Co.'s fish and potash	21.00	3.36	16 13	......	......	*7.72	6 95	3.74	3 37	26 45	40 00
17	Sulphate of ammonia (Mapes Co.)	2.37	20.43	98 06	......	......	......	......	......	......	98 06	100 00
18	Crocker's honest fertilizer	10.30	3.33	15 98	7.29	14 58	3.63	3 27	.96	86	34 69	40 00
19	Williams, Clark & Co.'s potato fertilizer	15.65	2.68	12 86	7.58	15 16	.64	58	10.97	9 87	38 47	54 00
20	Bone, H. Preston & Son	13.80	2.34	11 23	......	......	*14.02	12 62	......	......	23 85	33 00

* Total phosphoric acid in sample, and in samples 12 and 16, probably entitled to a higher valuation.

TABLE of analyses—(Continued).

Office number of sample.	DESIGNATION OF SAMPLE.	Per cent of water evaporated at 100° C (same as 212° Fahrenheit).	Per cent of total nitrogen in sample.	Valuation of nitrogen in sample at twenty-four cents per pound.	Per cent of available phosphoric acid in sample.	Valuation of available phosphoric acid in sample at ten cents per pound.	Per cent of insoluble phosphoric acid in sample.	Valuation of insoluble phosphoric in sample at four and a half cents per pound.	Potash (potassium oxide) in sample.	Valuation of potash in sample at four and a half cents per pound.	Total sum of preceding valuations.	Price per ton (2,000 lbs.) at which the fertilizer is stated to have been bought.
21	Baker's potato fertilizer	11.40	3.83	$18 38	5.40	$10 80	Trace.	......	9.30	$8 37	$37 55	$50 00
22	Boynton's farmers' promoter	27.70	3.67	17 62	......	......	*2.67	$2 40	.23	21	20 23	37 00
23	Bonedust, Peter Cooper's	7.60	1.33	6 38	......	......	*28.88	25 99	......	......	32 37	30 00
24	Rotted bone	25.70	2.56	12 29	......	......	*1.15	1 04	......	......	13 33	14 00
25	Baker's ammoniated superphosphate	12.90	3.00	14 40	9.47	18 94	1.42	1 28	2.42	2 18	36 80	45 00
26	Muriate of potash	......	......	......	......	......	......	......	†55.00	49 50	49 50	42 00
27	Barren Island potato fertilizer	18.45	2.89	13 87	7.78	15 56	.93	84	3.29	2 96	33 23	44 00
28	P. White & Son's guano substitute	16.15	8.23	39 50	......	......	*9.86	8 87	......	......	48 37	46 00
29	Forrester's potato fertilizer	8.10	4.27	20 50	5.77	11 54	Trace.	......	9.81	8 83	40 87	52 00
30	Guaranteed Peruvian guano	17.75	5.51	26 45	5.63	11 26	14.32	12 89	1.07	96	51 56	54 00
31	Cook's blood guano	15.90	1.45	6 96	8.07	16 14	3.30	2 97	1.59	1 43	27 50	36 00
33	Bowker Co.'s potato fertilizer	13.25	3.56	17 09	6.84	13 68	3.06	2 75	5.01	4 51	38 03	50 00
34	Baker's corn fertilizer	14.90	3.75	18 00	5.43	10 86	.95	85	8.02	7 22	36 93	50 00
35	Baker's bone	12.10	2.98	14 30	9.31	18 62	1.55	1 39	2.11	1 90	36 21	36 00
36	Baker's potato fertilizer	10.65	2.89	13 87	4.09	8 18	......	......	9.53	8 58	30 63	50 00
37	Baker's ground bone	8.15	2.78	13 34	......	......	*28.27	25 44	......	......	38 78	36 00
38	Mape's Co.'s potato fertilizer	8.05	2.90	13 92	11.66	23 32	1.40	1 26	6.10	5 49	43 99	50 00
39	Coe's Excelsior fertilizer	14.90	3.36	16 13	9.25	18 50	3.17	2 85	‡3.05	2 74	40 22	50 00
40	Farmers' Fertilizer Co.'s dissolved bone	14.65	1.01	4 85	11.22	22 44	2.96	2 66	.15	13	30 08	28 50
42	Acorn brand dissolved bone-black	12.75	.55	2 64	15.91	31 82	2.60	2 34	.20	18	36 98	30 00
44	Syracuse standard ammoniated bone phosphate,	17.20	§.90	4 32	7.99	15 98	3.71	3 34	1.93	1 74	25 38	30 00

* Total phosphoric acid in sample.

‡ Equivalent to sulphate of potash 5.64.

† Equivalent to chloride of potassium 87.11.

§ Does not include nitrates if present.

TABLE showing the fluctuations in the wholesale prices of SUNDRY FERTILIZING MATERIALS, *at New York, for nineteen months, May* 1881, *to November,* 1882, *prepared by* C. A. HUTCHINSON, B. S., *one of the* CHEMISTS OF THE CONNECTICUT EXPERIMENT STATION, *and printed in the Station report of* 1882. *

MONTHS.	Cost at Wholesale in New York of Nitrogen in —				Of potash in muriate of potash.
	Blood.	Azotin and ammonite.	Nitrate of soda.	Sulphate of ammonia.	
	Cents per lb.	Cents per lb.	Cents per lb.	Cents per lb.	Cents per lb.
1881.					
May	21.3	21.8	21.9	24.7	3.78
June	21.5	21.8	21.1	24.8	3.86
July	22.0	21.8	20.8	25.6	3.92
August	22.4	22.1	20.8	25.2	4.06
September	23.8	....	20.9	24.7	3.78
October	23.0	24.3	20.8	24.9	3.64
November	23,3	24.3	20.4	25.6	3.62
December	23.1	.. .	20.3	25.7	3.60
1882					
January	23.0	....	19.9	25.6	3.71
February	22.3	22.2	19.8	25.6	3.60
March	19.6	20.1	18.3	25.0	3.36
April	19.7	19.7	18.4	23.8	3.24
May	19.1	19.7	18.3	22.7	3.26
June	18.9	19.7	16.9	22.4	3.28
July	19.8	19.5	16.8	22.4	3.40
August	19.5	19.5	16.8	22.4	3.52
September	19.7	20.3	17.7	22.4	3.60
October	19.7	20.1	17.8	22.3	3.56
November	19,7	20.1	17.5	22.2	3.56

---

* The price given for each month is the mean of the four weekly quotations in that month. Sulphate of ammonia is assumed to contain 20 per cent and nitrate of soda 15.6 per cent of nitrogen; muriate of potash is assumed to contain 50½ per cent of actual potash or 80 per cent of the pure muriate. In September and December, 1881, and in January, 1882, azotin and ammonite were not quoted at all.

AWARDS

AT THE FORTY-SECOND ANNUAL CATTLE SHOW AND FAIR OF THE NEW YORK STATE AGRICULTURAL SOCIETY, HELD AT UTICA, SEPTEMBER 25 TO 29, 1882.

CATTLE.

Shorthorns.

Shorthorn Herd Prize.

Daniel B. Haight, Dover Plains, N. Y.; large gold medal.

Bull, Waterloo 3rd, red, bred by exhibitor; calved May 25, 1880, sire Oneida Prince, 27359, dam Constance of Lyndale 8th, by 7th Lord Oxford, 17586, gr. d. Constance of Lyndale 2nd by Scotsman, 27435.

Cow, Constance of Lyndale 8th, roan, bred by W. S. King, Minneapolis, Minn.; calved March 10, 1876, sire 7th Lord Oxford, 17586, dam Constance of Lyndale 2nd by Scotsman (27435), gr. d. Constance 6th by 7th Duke of Airdrie (23718).

Cow, Constance of Brookdale, roan, bred by W. S. King, Minneapolis, Minn.; calved March 5, 1877, sire Wildeyes Duke, 21325, dam Constance 6th, by 7th Duke of Airdrie (23718), gr. d. Constance 3rd by Clifton Duke (23580).

Cow, Constance of Brookdale, 4th roan, bred by exhibitor; calved September 24, 1878, sire Oneida Prince, 27359, dam Constance 6th by 7th Duke of Airdrie (23718), gr. d. Constance 3rd by Clifton Duke (23580).

Heifer, Constance of Brookdale, 7th, roan, bred by exhibitor; calved December 16, 1879, sire Baron of Brookdale 28511, dam Constance 5th by Earl of Seaham 8077, gr. d. Constance 3rd by Clifton Duke (23580).

Shorthorn Bulls over Three Years Old.

Daniel C. Munro, Elbridge, N. Y.; first prize, fifty dollars, Earl of Clifton, red, bred by Charles M. Lansing, Niagara, Canada; calved May 17, 1879, sire Baron Percy, 28549, dam Countess of Belvoir by 22nd Duke of Airdrie 16695, gr. d. Campaspe 2nd by 4th Grand Duke of Oxford, 5734.

M. B. Ritter, Waterloo, N. Y.; second prize, twenty-five dollars, Prince of the River, red, with a little white, bred by Charles F. Wadsworth, Geneseo, N. Y.; calved August 13, 1871, sire Grand Duke, 8247, dam Rosaline by Berkshire Duke,2539, gr. d. Tuberose 5th by Tornado, 1040.

Shorthorn Bulls Two Years Old.

Daniel B. Haight, Dover Plains, N. Y.; first prize, forty dollars, Waterloo 3rd, red, bred by exhibitor; calved May 25, 1880, sire Oneida Prince, 27359, dam Constance of Lyndale 8th by 7th Lord Oxford, 17586, gr. d. Constance of Lyndale 2nd by Scotsman, 27435.

William S. Moore, Jr., Mount Upton, N. Y.; second prize, twenty dollars, Waterloo, roan, bred by Daniel B. Haight, Dover Plains, N. Y.; calved January 16, 1880, sire Baron Brookdale, 28511, dam Constance 6th by 7th Duke of Airdrie (23718), gr. d. Constance 3rd by Clifton Duke (23580).

Shorthorn Bulls One Year Old.

Daniel B. Haight, Dover Plains, N. Y.; second prize, fifteen dollars, Lord of Rowfant, red and white, bred by B. C. Rumsey, Buffalo, N.Y.; calved May 16, 1881, sire 2nd Duke of Cornwall (43082), dam Rowfant Peach by 2d Duke of Underley (36551), gr. d. Peach Blossom 12th by 8th Duke of York (28480).

Shorthorn Bull Calves over Five Months Old.

William S. Moore, Jr., Mount Upton, N. Y.; second prize, five dollars, Waterloo of Upton, roan, bred by exhibitor; calved November 19, 1881, sire Waterloo, dam Countess of Lonsdale by Bancroft, 5341, gr. d. Duchess of Lancaster by Grand Duke of Oxford (16184).

Shorthorn Cows over Three Years Old.

Daniel B. Haight, Dover Plains, N. Y.; first prize, forty dollars, Constance of Lyndale 8th, roan, bred by W. S. King, Minneapolis, Minn.; calved March 10, 1876, sire 7th Lord Oxford, 17586, dam Constance of Lyndale 2nd by Scotsman (27435), gr. d. Constance 6th by 7th Duke of Airdrie (23718).

M. B. Ritter, Waterloo, N. Y.; second prize, twenty dollars, Maud May 2nd, red with a little white, bred by exhibitor; calved May 14, 1877, sire Royal Duke of Waterloo, 18252, dam Flora by Duke of Airdrie, 2743, gr. d. Florida by Colin Campbell, 3763.

Shorthorn Heifers Two Years Old.

M. B. Ritter, Waterloo, N. Y.; first prize, thirty dollars, Grace, red with a little white, bred by exhibitor; calved February 18, 1880, sire Prince of the River, 12677, dam Flora by Duke of Airdrie, 2743, gr. d. Florida by Colin Campbell, 3763.

Daniel B. Haight, Dover Plains, N. Y.; second prize, fifteen dollars, Constance of Brookdale 7th, roan, bred by exhibitor; calved December 16, 1879, sire Baron of Brookdale, 28511, dam Constance 5th by Earl of Seaham, 8077, gr. d. Constance 3rd by Clifton Duke, 3760 (23580).

Shorthorn Heifers One Year Old.

M. B. Ritter, Waterloo, N. Y.; first prize, twenty dollars, Princess 3rd, red with a little white, bred by exhibitor; calved February 24, 1881, sire Prince of the River, 12677, dam Maud by Warwick, 6282, gr. d. Flora by Duke of Airdrie, 2743.

Daniel B. Haight, Dover Plains, N. Y.; second prize, ten dollars, Constance of Brookdale 9th, red with a little white, bred by exhibitor; calved May 8, 1881, sire Oneida Prince, 27359, dam Constance 5th by Earl of Seaham, 8077, gr. d. Constance 3rd by Clifton Duke, 3760 (23580).

Shorthorn Heifer Calves over Five Months Old.

M. B. Ritter, Waterloo, N.Y.; first prize, ten dollars, Lotty S., red, bred by exhibitor; calved March 10, 1882, sire 3rd Earl of Oxford, 35423, dam Flora by Duke of Airdrie, 2743, gr. d. Florida by Colin Campbell, 3763.

Benjamin Fellows, Clifton, N. Y.; second prize, five dollars, Jennie, red, bred by exhibitor; calved March 29, 1882, sire Earl of Oxford, 35422, dam 6th Duchess of Woodhill by Grand Duke of Gordon (28757), gr. d. Young Duchess of Woodhill by Garibaldi, 17136.

DEVONS.

Devon Herd Prize.

A. F. Bronson, Vernon, N. Y.; large gold medal.

Bull, Jeddo, bred by James Buckingham, Zanesville, Ohio; calved March 31, 1880, sire Hudson, 699, dam Nemophila 3rd, by Jack, 721, gr. d. Nemophila by Omer Pasha, 127.

Cow, Sunshine, bred by E. W. Davis, Oneida, N. Y.; calved September 16, 1877, sire Litchfield, 789, dam Cherry, by Connewango, 428, gr. d. Fruitful, by Roscius, 1072.

Cow, Victoria, bred by George Rudd, Guelph, Canada; calved October 10, 1878, sire Prince Albert Victor, 227½, dam Maid of Honor, by Hartland, 655, gr. d. Cherry Pie, by Young Curley Prince of Wales, 440.

Heifer, Bride of Greenwood, bred by George Rudd, Guelph, Canada; calved May 15, 1880, sire Kempenfelt, 759, dam Blue Bell, by Samson 6th, 1101, gr. d. Daisy by Prince Albert, 973.

Heifer, Harlie, bred by exhibitor; calved April 1, 1881, sire Brant, 1344, dam Verna, by Litchfield, 789, gr. d. Belle, by Grant, 638.

Heifer, Ellie Rhea, bred by George Rudd, Guelph, Canada; calved April 10, 1881, sire The Marquis, 1705, dam Blossom, by Dandy, 447, gr. d. Miss Ann, by Hartland, 655.

Devon Bulls over Three Years Old.

Joseph Hilton, New Scotland, N. Y.; first prize, fifty dollars, Prince of Wales 20th, bred by exhibitor; calved December 12, 1878, sire Crown Prince, 434; dam Edith 9th, by Prince of Wales, 151, gr. d. Fanny, by Prince of Wales, 151.

William H. Jones, South Montrose, Penn.; second prize, twenty-five dollars, Mordecai, bred by E. E. Tiffany, Brooklyn, Penn.; calved March 19, 1879, sire Prince of Orange, 1761, dam Edith 7th, by Prince of Wales, 151, gr. d. Edith 2nd, by Sachem, 1089.

Devon Bulls Two Years Old.

A. F. Bronson, Vernon, N. Y.; first prize, forty dollars, Jeddo, bred by James Buckingham, Zanesville, Ohio; calved March 31, 1880, sire Hudson, 699, dam Nemophila 3rd by Jack, 721, gr. d. Nemophila, by Omer Pasha, 127.

Ensign & Brown, Jeddo, N. Y.; second prize, twenty dollars, Zib, bred by A. F. Bronson, Vernon, N. Y.; calved April 1, 1880, sire Lord Nelson 2nd, 801, dam Cherry 3rd, by Mohawk, 872, gr. d. Cherry, by Young Baltimore, 267.

Devon Bulls One Year Old.

A. F. Bronson, Vernon, N. Y.; first prize, thirty dollars, Wonder, bred by exhibitor; calved May 10, 1881, sire Brant, 1344, dam Flora, by Grant, 638, gr. d. Tilt, by Dandy, 445.

J. A. Pomeroy, Sidney Centre, N. Y.; second prize, fifteen dollars, Hiawatha, bred by Truman Baker, Earlville, N. Y.; calved January 29, 1881, sire Litchfield 2nd, 1766, dam Jenny Lind 7th, by Mohawk, 872, gr. d. Jenny Lind 4th, by Frank Baker, 572.

Devon Bull Calves over Five Months Old.

William M. White, Canaseraga, N. Y.; first prize, ten dollars, Hugo, bred by exhibitor; calved March 16, 1882, sire Independence, 713, dam Lovely 24th, by Red Jacket, 1033, gr. d. Wanda 2nd, by Queen Anne's Huron, 1014.

J. A. Pomeroy, Sidney Centre, N. Y.; second prize, five dollars, Dandy Devon, bred by exhibitor; calved April 1, 1882, sire Uncas, 1196, dam Silvy, by Genesee 2nd, 616, gr. d. Long Horn, by Mohawk, 872.

Devon Cows over Three Years Old.

A. F. Bronson, Vernon, N. Y.; first prize, forty dollars, Victoria, bred by George Rudd, Guelph, Canada; calved October 10, 1878, sire Prince Albert Victor, 227½, dam Maid of Honor, by Hartland, 655, gr. d. Cherry Pie, by Young Curley Prince of Wales, 440.

Joseph Hilton, New Scotland, N. Y.; second prize, twenty dollars, Edith 12th, bred by exhibitor; calved December 12, 1875, sire Prince of Wales 151, dam Edith 4th, by Prince of Wales, 151, gr. d. Edith 2nd, by Sachem, 1089.

Devon Heifers Two Years Old.

A. F. Bronson, Vernon, N. Y.; first prize, thirty dollars, Bridge of Greenwood, bred by George Rudd, Guelph, Canada; calved May 15, 1880, sire Kempenfelt, 759, dam Blue Bell, by Sampson 6th, 1101, gr. d. Daisy, by Prince Albert, 973.

William H. Jones, South Montrose, Penn.; second prize, fifteen dollars, Audenreid, bred by exhibitor; calved June 1, 1880, sire Jones' Prince of Wales, 751½, dam Rose of May, by Prince of Wales 12th, 1002, gr. d. Old Rose 3rd, by Comet, 420.

Devon Heifers One Year Old.

A. F. Bronson, Vernon, N. Y.; first prize, twenty dollars, Harlie, bred by exhibitor; calved April 1, 1881, sire Brant, 1344, dam Verna by Litchfield, 789, gr. d. Belle, by Grant, 638.

Joseph Hilton, New Scotland, N. Y.; second prize, ten dollars, Lucy, bred by exhibitor; calved March 3, 1881, sire Crown Prince, 434, dam Edith 13th, by Prince of Wales, 151, gr. d. Edith 7th, by Prince of Wales, 151.

Devon Heifer Calves over Five Months Old.

William M. White, Canaseraga, N. Y.; first prize, ten dollars, Lovely 36th, bred by exhibitor; calved March 20, 1882, sire Independence, 713, dam Lovely 21st, by Lovely's Huron 3rd, 806; gr. d. Lovely 18th, by Young Exeter, 546.

Ensign & Brown, Jeddo, N. Y.; second prize, five dollars, Mabel, bred by exhibitors; calved March 13, 1882, sire Zib, dam Hollyberry, by Doctor, 462, gr. d. Verna, by Litchfield, 789.

HEREFORDS.

Hereford Herd Prize.

Erastus Corning, Albany, N. Y., large gold medal.

Bull, Comus, red with white face, bred by P. Turner, Pembridge, Herefordshire, England; calved July 21, 1872, sire Provost (4067), dam Kathleen, by Bolingbroke (1883), gr. d. Redwing, by Felix (953).

Cow, Marchioness 2nd, red with white face, bred by exhibitor; calved April, 1869, sire Major, dam Marchioness, by Washington (5134), gr. d. Lady imported by exhibitor.

Cow, Victoria 6th, red with white face, bred by exhibitor; calved June 12, 1874, sire Taurus, dam Victoria 5th, by S. Goddard, gr. d. Victoria 4th, by Cardinal Wiseman.

Cow, Katy, red with white face, bred by exhibitor; calved April, 1875, sire Comus (4457), dam Princess 2nd, by Washington (5134), gr. d. Princess, imported by exhibitor.

Cow, Topsy-Turvy, red with white face, bred by exhibitor; calved March 13, 1877, sire Comus (4457), dam Topsy, by Taurus, gr. d. Marchioness 2nd, by Major.

Cow, Edna, red with white face, bred by exhibitor; calved February 9, 1879, sire Comus (4457), dam Victoria 6th, by Taurus, gr. d. Victoria 5th, by S. Goddard.

Hereford Bulls over Three Years Old.

Erastus Corning, Albany, N. Y.; first prize, fifty dollars, Comus, red with white face, bred by P. Turner, Pembridge, Herefordshire, England; calved July 21, 1872, sire Provost (4067), dam Kathleen, by Bolingbroke (1883), gr. d. Redwing, by Felix (953).

Hereford Cows over Three Years Old.

Erastus Corning, Albany, N. Y. ; first prize, forty dollars, Marchioness 2nd, red with white face, bred by exhibitor ; calved April, 1869, sire Major, dam Marchioness, by Washington (5134), gr. d. Lady imported by exhibitor.

Hereford Heifer Calves over Five Months Old.

Erastus Corning, Albany, N. Y.; first prize, ten dollars, Edna 2nd, red with white face, bred by exhibitor ; calved December 31, 1881, sire Comus (4457), dam Edna, by Comus (4457), gr. d. Victoria 6th, by Taurus.

AYRSHIRES.

Ayrshire Herd Prize.

Ambie S. Tubbs, Mexico, N. Y.; large gold medal.

Bull, Shirley Douglas, red and little white, bred by Joseph F. Brown, Providence, R. I.; calved July 31, 1880, sire Enoch Douglas 2001, dam Floy Douglas, by Lord Lyon, 691, gr. d. Jessie Douglas, by McIvor, 46.

Cow, Dahlia 2nd, red and white, bred by J. F. Converse, Woodville, N. Y.; calved May 6, 1872, sire Woodville Chief, 1542, dam Dahlia, (imported in 1871 by J. F. Converse), by Gilpin, gr. d. Flecky.

Cow, Dahlia 3rd, red and white, bred by J. F. Converse, Woodville, N. Y.; calved April, 1874, sire Woodville Chief, 1542, dam Dahlia (imported in 1871 by J. F. Converse), by Gilpin, gr. d. Flecky.

Cow, Dahlia 5th, red and white, bred by J. 'F. Converse, Woodville, N. Y.; calved April 15, 1876, sire Woodville Chief, 1542, dam Dahlia (imported in 1871 by J. F. Converse), by Gilpin, gr. d. by Flecky.

Heifer, Josie Douglas, red and white, bred by J. F. Converse, Woodville, N. Y.: calved April 4, 1881, sire Prince Charley, 1689, dam Dahlia 3rd, by Woodville Chief, 1542, gr. d. Dahlia (imported in 1871 by J. F. Converse.)

Heifer, Jane Douglas, red and brown and little white, bred by Lewis Tubbs & Son, Mexico, N. Y.; calved April 18, 1881, sire Prince Charley, 1689, dam Jane Garfield, by Kash, 1237, gr. d. Helen Pender, by Woodville Chief, 1542.

Ayrshire Bulls over Three Years Old.

Warren Crissey, Great Barrington, Mass.; first prize, fifty dollars, Clifford red and white, bred by exhibitor : calved May 20, 1879, sire Laird of Avon, 2061, dam Snowdrop, by Mars, 715, gr. d. Medora, by Tarbolton, 372.

Oneida Community Limited, Community, Y. N.: second prize, twenty-five dollars, Kilmarnock 25th, red and white, bred by exhibitor ; calved December 26, 1877, sire Kilmarnock, 1245, dam Mistress 3rd, by Eglinton, 21, gr. d. Mistress 2nd, imported by H. H. Peters.

Ayrshire Bulls Two Years Old.

Ambie S. Tubbs, Mexico, N. Y.; first prize, forty dollars, Shirley Douglas, red and little white, bred by Joseph F. Brown, Providence, R. I.; calved July 31, 1880, sire Enoch Douglas, 2001, dam Floy Douglas by Lord Lyon, 691, gr. d. Jessie Douglas by McIvor, 46.

H. R. C. Watson, West Farms, N. Y.; second prize, twenty dollars, Gayarre, mostly red, bred by J. F. Converse, Woodville, N. Y.; calved April 4, 1880, sire Woodville Chief, 1542, dam Bessie Belle, imported by J. F. Converse.

Ayrshire Bulls One Year Old.

H. R. C. Watson, West Farms, N. Y.; first prize, thirty dollars, Sir Hugh, red and white, bred by William Watson, West Farms, N. Y.; calved May 25, 1881, sire Robert Mars, 2176, dam Lily by Sir Thomas Moore, 1469, gr. d. Ayrshire Mary, imported by William Rodden, Montreal, Canada.

E. B. Hawks, Wells Bridge, N. Y.; second prize, fifteen dollars, Scotch Chief, red and white, bred by Thomas Miller, Brushland, N. Y.; calved June 10, 1881, sire Sir Henry, 2496, dam Rosy, imported by Thomas Miller.

Ayrshire Bull Calves over Five Months Old.

Ambie S. Tubbs, Mexico, N. Y.; first prize, ten dollars, Vinewood Prince, red and white, bred by Lewis Tubbs & Son, Mexico, N. Y.; calved October 13, 1881, sire Mexico Prince, 2431, dam Dahlia 2nd by Woodville Chief, 1542, gr. d. Dahlia, imported in 1871 by J. F. Converse, Woodville, N. Y.

G. H. Bell, Rome, N. Y.; second prize, five dollars, Winfield Boy 3rd, red and white, bred by exhibitor; calved March 17, 1882, sire Winfield Boy, 2610, dam Draxy Miller by 224 Treasurer, gr. d. Pet by 200 Rob Roy.

Ayrshire Cows over Three Years Old.

Ambie S. Tubbs, Mexico, N. Y.; first prize, forty dollars, Dahlia 5th, red and white, bred by J. F. Converse, Woodville, N. Y.; calved April 15, 1876, sire Woodville Chief, 1542, dam Dahlia, imported in 1871 by J. F. Converse, by Gilpin, gr. d. Flecky.

H. R. C. Watson, West Farms, N. Y.; second prize, twenty dollars, Duchess of Smithfield, red and white, bred by H. E. Smith, Smithfield, R. I.; calved December 20, 1876, sire Lion Douglas, 1261, dam Hester 2nd by Prince Edward, 787, gr. d. Hester by Lord Lion, 691.

Ayrshire Heifers Two Years Old.

H. R. C. Watson, West Farms, N. Y.; first prize, thirty dollars, Bonnie Annie, dark red and white, bred by estate of William Watson, West Farms, N. Y.; calved February 15, 1880, sire General Montgomery, 2170, dam Anna 2nd by Belcher, 965, gr. d. Anna by Angus, 1550.

G. H. Bell, Rome, N. Y.; second prize, fifteen dollars, Draxy's Daughter, white and red, bred by exhibitor; calved April 5, 1880, sire 813 Gansevoort, dam Draxy Miller by 224 Treasurer, gr. d. Pet by 200 Rob Roy.

Ayrshire Heifers One Year Old.

H. R. C. Watson, West Farms, N. Y.; first prize, twenty dollars, Roxana 6th, mostly red, bred by J. D. W. French, North Andover, Mass.; calved June 23, 1881, sire Moncrieff, 2516, dam Roxana by McDonald 3rd, 263, gr. d. Rose by Souter Johnnie, 71.

Stryker & Jones, Rome, N. Y.; second prize, ten dollars, Princess Louise, dark red and white, bred by Jardine & Sons, Hamilton, Canada; calved September 27, 1880, sire Mars 1st, 2177, dam Princess Louise, imported by Jardine & Sons.

Ayrshire Heifer Calves over Five Months Old.

G. H. Bell, Rome, N. Y.; first prize, ten dollars, Daisy Tresham 2nd, red and white, bred by exhibitor; calved February 21, 1882, sire Winfield Boy, 2610, dam Daisy Tresham by 853 Kilmarnock 2nd, gr. d. Kate Tresham by Norval, 762.

Stryker & Jones, Rome, N. Y.; second prize, five dollars, Spotted Beauty 4th, white and red, bred by exhibitors; calved March 1, 1882, sire 935 Romulus, dam Spotted Beauty 2nd by 203 Rocket, gr. d. Spotted Beauty by 182 Ploughboy.

HOLSTEINS.

Holstein Herd Prize.

Smiths & Powell, Syracuse, N. Y., large gold medal.

Bull, Prince of Edam, black and white, bred by M. Brommersma, Purmer, North Holland; calved March 15, 1878, sire District Bull, dam Grietji.

Cow, Ægis, black and white, bred by Gerrit S. Miller, Peterboro, N. Y.; calved October 2, 1873, sire Rip Van Winkle 35, dam Agoo, imported.

Cow, Lady Netherland, black and white, bred by A. C. Koning, Beemster, North Holland, calved March 10, 1874.

Cow, Aaggie, black and white, bred by J. Wit Az, Midwoud, North Holland; calved April 1, 1874.

Cow, Netherland Queen, black and white, bred by A. C. Koning, Beemster, North Holland; calved March 26. 1877, dam Lady Netherland.

Cow, Carlotta, black and white, bred by C. Beets, Beemster, North Holland; calved March, 1879, sire District Bull.

Holstein Bulls over Three Years Old.

Smiths & Powell, Syracuse, N. Y.; first prize, fifty dollars, Prince of Edam, black and white, bred by M. Brommersma, Purmer, North Holland; calved March 15, 1878, sire District Bull, dam Grietji.

Stryker & Jones, Rome, N. Y.; second prize, twenty-five dollars, Barneveld, white and black, bred by John Stryker, Rome, N. Y.; calved March 1, 1879, sire Richelieu, 333, dam Lea, imported by John H. Comer, Goshen, N. Y., in 1874.

Holstein Bulls Two Years Old.

Smiths & Powell, Syracuse, N. Y.; first prize, forty dollars, Netherland Prince, black and white, bred by A. C. Koning, Beemster, North Holland; calved April 1, 1880, sire Schimmel, dam Lady Netherland.

F. T. Ferguson, Malone, N. Y.; second prize, twenty dollars, Ginger, black and white, bred by H. C. Hoffman, Horseheads, N. Y.; calved March 10, 1880, sire Dyken, 233, dam Holland Princess by Holland Prince, 113, gr. d. Holland Queen, imported by T. E. Whiting, Concord, Mass.

Holstein Bulls One Year Old.

Smiths & Powell, Syracuse, N. Y.; first prize, thirty dollars, Benjamin, black and white, bred by William M. Singerly, Philadelphia, Penn.; calved February 21, 1881, sire Iagoo, 270, dam Agostina, imported from North Holland by W. R. Willets, Skaneateles, N. Y., December, 1878.

Howard G. White, Syracuse, N. Y.; second prize, fifteen dollars, Prince Bismarck, black and white, bred by exhibitor; calved February 20, 1881, sire Corujum, 424, dam Vlaaske, imported by exhibitor.

Holstein Bull Calves over Five Months Old.

Smiths & Powell, Syracuse, N. Y.; first prize, ten dollars, Prince Imperial, black and white, bred by exhibitors; calved April, 1882, sire Netherland Prince, 716, dam Carlotta, imported.

Smiths & Powell, Syracuse, N. Y.; second prize, five dollars, Kenmore, black and white, bred by D. Schoper, Westwond, North Holland; calved February 24, 1882, sire District Bull, dam Czarina.

Holstein Cows over Three Years Old.

Howard G. White, Syracuse, N. Y.; first prize, forty dollars, Princess Dagmar, black and white, bred by exhibitor; calved February 11, 1879, sired in Holland, dam Vlaaske, imported by exhibitor.

Smiths & Powell, Syracuse, N. Y.; second prize, twenty dollars, Netherland Queen, black and white, bred by A. C. Koning, Beemster, North Holland; calved March 26, 1877, dam Lady Netherland.

Holstein Heifers Two Years Old.

Smiths & Powell, Syracuse, N. Y.; first prize, thirty dollars, Ristori, black and white, bred by Jacob Hartog, Beemster, North Holland; calved March 13, 1880, sire District Bull, dam Tyme.

Smiths & Powell, Syracuse, N. Y.; second prize, fifteen dollars, Hazel Kirke, black and white, bred by C. Donker, Benningbrocht, North Holland; calved February 23, 1880, sire District Bull, dam Anna 2nd.

Holstein Heifers One Year Old.

Smiths & Powell, Syracuse, N. Y.; first prize, twenty dollars, Netherland Queen 3rd, black and white, bred by exhibitors; calved May 16, 1881, sire Uncle Tom, 173, dam Netherland Queen, imported in dam Lady Netherland.

Smiths & Powell, Syracuse, N. Y.; second prize, ten dollars, Damsel 2nd, black and white, bred by Jan de Boer, Nijdrecht, North Holland; calved February 24, 1881, sire Sijmen, (93), dam Grietji.

Holstein Heifer Calves over Five Months Old.

Stryker & Jones, Rome, N. Y.; first prize, ten dollars, Lady of Oneida 2nd, black and white, bred by exhibitors; calved Febuary 10, 1882, sire Rubenstein, 450, dam Lady of Oneida, by 4th Prince of Orange, 246, gr. d. Lea, imported by John H. Comer, Goshen, N. Y., in 1874.

Smiths & Powell, Syracuse, N. Y.; second prize, five dollars, Meadow Lily 3rd, black and white, bred by exhibitors; calved April, 1882, sire Uncle Tom, 163, dam Meadow Lily, imported from North Holland in July, 1879, by exhibitors.

JERSEYS.

Jersey Herd Prize.

Theodore F. H. Meyer, Bolton, N. Y., large gold medal.

Bull, Polonius, dark fawn, bred by A. B. Darling, New York, N. Y.; calved November 6, 1875, sire Sarpedon, 930, dam Leda by Jupiter, 93, gr. d. Europa by Jupiter, 93.

Cow, Beauty, light brown, bred by Amice Alexander, Isle of Jersey; calved in 1873, imported by John D. Wing in 1880.

Cow, Fancy Fan, solid brown, bred on Isle of Jersey; calved April, 1875, imported by John D. Wing in 1880.

Cow, St. Mary's Lass, dark fawn, bred on Isle of Jersey; calved April, 1878, imported by John D. Wing in 1880.

Cow, Young Duchess, dark fawn, bred by Admiral Saumarez, Isle of Jersey; calved spring of 1876, imported by John D. Wing in 1880.

Cow, Belle of Suffield 3rd, brown with white spots, bred by Horatio J. Lothrop, Suffield, Conn.; calved April 4, 1877, sire Bellini 2nd, 1761, dam Belle of Suffield, by Sam, 980, gr. d. Nelly 4th, by Don Pedro, 836.

Jersey Bulls over Three Years Old.

Theodore F. H. Meyer, Bolton, N. Y.; first prize, fifty dollars, Polonius, dark fawn, bred by A. B. Darling, New York; calved November 6, 1875, sire Sarpedon, 930, dam Leda, by Jupiter, 93, gr. d. Europa, by Jupiter, 93.

John D. Wing, Millbrook, N. Y.; second prize, twenty dollars, John Rex, orange fawn, bred by W. S. & H. E. Savage, East Berlin, Conn.; calved March 4, 1876, sire Rex, 1330, dam Usilda, imported in dam Lady Messervy by H. M. Wellington in January, 1869.

Jersey Bulls Two Years Old.

John D. Wing, Millbrook, N. Y.; first prize, forty dollars, Tadcaster, dark fawn, bred by John Hudin, Isle of Jersey; calved July 28, 1880, sire Devil to Pay (F. S. 230, I. H. B.), dam Tidy 2nd, by Vertumnus (P. S. 161, I. H. B.), gr. d. Tidy (P. S. 124, I. H. B.)

Edward L. Clarkson, Tivoli, N. Y.; second prize, twenty dollars, Eric of Clermont, squirrel gray, bred by exhibitor; calved April 16, 1880, sire Index, 1743, dam, Eveline of Jersey, imported by exhibitor March 5, 1878.

Jersey Bulls One Year Old.

F. S. Peer, East Palmyra, N. Y.; first prize, thirty dollars, Duke of Manchester, squirrel gray, bred by H. Schutt, Port Gibson, N. Y.; calved March 13, 1881, sire Troy, 5404, dam Mollie Garfield, by Bel Caliph, 1432, gr. d. Maple Dale, by Victor, 797.

H. B. Curran, Whitestown, N. Y.; second prize, fifteen dollars, Young Rajah, gray and white, bred by John S. Barstow, South Portsmouth, R. I.; calved April 28, 1881, sire Rajah of Greenvale, 2533, dam Miss Lee, by Magnetic, 1428, gr. d. Lady Lee, by Rajah, 340.

Jersey Bull Calves over Five Months Old.

John D. Wing, Millbrook, N. Y.; first prize, ten dollars, , dark fawn, bred by exhibitor; calved March 1, 1882, sire Tadcaster, 5150, dam Mahala 2nd, by Polonius, 2513, gr. d. Mahala, by Rex, 1330.

Edward L. Clarkson, Tivoli, N. Y.; second prize, five dollars, Young Duke of Darlington, squirrel grey, bred by W. A. Mullin, Mt. Holly Springs, Penn., calved February 8, 1882, sire Duke of Darlington, 2460, dam Lady Vermont; imported in dam Miss Vermont, by W. R. McCready, Saugatuck, Conn., in September, 1878.

Jersey Cows over Three Years Old.

Theodore F. H. Meyer, Bolton, N. Y.; first prize, forty dollars, Fancy Fan, solid brown, bred on Isle of Jersey; calved April, 1875, imported by John D. Wing, in 1880.

Erastus Corning, Albany, N. Y.; second prize, twenty dollars, Maida, deer color and black, bred by Thomas H. Faile, West Farms, N. Y.; calved May 2, 1875, sire Bismarck, 1423, dam Myrita, by Mercury, 432, gr. d. Myra, by Dolphin 2nd, 468.

Jersey Heifers Two Years Old.

John D. Wing, Millbrook, N. Y.; first prize, thirty dollars, Flower Girl, smoky fawn, bred on Isle of Jersey; calved April 10, 1880, sire Carlo (P. S. 180, J. H. B.).

H. W. Skerritt, Deansville, N. Y.; second prize, fifteen dollars, Eola, light fawn, bred by George Blanchard & Bro., Cumberland Centre, Me.; calved May 12, 1880, sire Floto, 7241, dam Olivia Belle, by Duke of Cumberland, 1847, gr. d. Obella by Nutshell, 729.

Jersey Heifers One Year Old.

Theodore F. H. Meyer, Bolton, N. Y.; first prize, twenty dollars, Esmeraldina, fawn, bred by William S. Taylor, Burlington, N. J.; calved June 16, 1881, sire Gilderoy 2nd, 4037, dam Pattie Mc 6th, by Jersey Dick, 2936, gr. d. Pattie Mc, by Roxbury, 247.

H. R. C. Watson, West Farms, N. Y.; second prize, ten dollars, Young Lady, dark fawn, bred by Charles F. Dorey, Trinity, Jersey; calved June 4, 1881, sire Dido (251 P. S.), dam Lady Young.

Jersey Heifer Calves over Five Months Old.

H. B. Curran, Whitestown, N. Y.; first prize, ten dollars, Valencia, fawn and white, bred by John S. Barstow, South Portsmouth, R. I.; calved December 5, 1881, sire Newsboy, 5689, dam Barine, by Rajah of Greenvale, 2533, gr. d. Unita, by Nonquit, 1391.

H. R. C. Watson, West Farms, N. Y.; second prize, five dollars, Cherry Budd, pure fawn, bred by exhibitor; calved February 10, 1882, sire Budd, 4469, dam Cherry Ripe, by Westchester, 1266, gr. d. Light Fawn, imported by Captain Pratt in 1870.

GUERNSEYS.

Guernsey Herd Prize.

L. W. Ledyard, Cazenovia, N. Y.; Large Gold Medal.

Bull, Fernwood, orange, fawn and white; calved April 2, 1878, imported, in dam Fernwood Fancy, by C. M. Beach, Hartford, Conn.

Cow, Elegante, orange, fawn and white, bred by Stephen Le Pelley, in Guernsey; calved December, 1874, sire Excelsior 1st, dam Elegante.

Cow, Roselle, orange, fawn and white, bred by Augustus Ward, Farmington, Conn. calved July 6, 1877, sire Prince, 17, dam La Gelé, imported by M. C. Weld, New York. April, 1876.

Cow, Lastrea, orange, fawn and white, bred by Jean Le Coquierre, in Guernsey; calved January, 1879.

Heifer, Olivette, orange, fawn and white, bred by Augustus Ward, Farmington, Conn.; calved March 6, 1880, sire Don Pedro, 52, dam La Gelé, imported by M. C. Weld, New York, April, 1876.

Heifer, Fern Leaf, orange, fawn and white, bred by exhibitor; calved February 13, 1881, sire Fernwood, 190, dam Kathleen, imported by C. M. Beach, Hartford, Conn., October 27, 1877.

Guernsey Bulls over Three Years Old.

L. W. Ledyard, Cazenovia, N. Y.; first prize, fifty dollars, Fernwood, orange fawn and white; calved April 2, 1878, imported, in dam Fernwood Fancy, by C. M. Beach, Hartford, Conn.

Guernsey Bulls Two Years Old.

Henry A. Morgan, Aurora, N. Y.; first prize, forty dollars, Gold Fern, orange, fawn and white, bred by William Burridge, St. Andrew's Parish, Guernsey; calved December, 1879, sire St. Andrew 2nd, dam Nellie.

Guernsey Bulls One Year Old.

L. W. Ledyard, Cazenovia, N. Y.; first prize, thirty dollars, Sunshine, light orange, fawn, bred by Edward Norton, Farmington, Conn.; calved March 16, 1881, sire Malbrook 23, dam Princess, imported by M. C. Weld in April, 1876.

Howard G. White, Syracuse, N. Y.; second prize, fifteen dollars, Duke of Fernwood, light orange fawn and white, bred by L. W. Ledyard, Cazenovia, N. Y.; calved July 31, 1881, sire Fernwood 190, dam Fernwood Fancy, imported by C. M. Beach, Hartford, Conn.

Guernsey Bull Calves over Five Months Old.

L. W. Ledyard, Cazenovia, N. Y.; first prize, ten dollars, Guernsey Boy, orange, fawn and white, bred by exhibitor; calved December 4, 1881, sire Gold Fern 243, dam Onoclea, imported by exhibitor September 10, 1880.

Guernsey Cows over Three Years Old.

L. W. Ledyard, Cazenovia, N. Y.; first prize, forty dollars, Elegante, orange fawn and white, bred by Stephen Le Pelley in Guernsey; calved December, 1874, sire Excelsior 1st, dam Elegante.

Guernsey Heifers Two Years Old.

L. W. Ledyard, Cazenovia, N. Y.; first prize, thirty dollars, Ontiora, reddish fawn, bred by LeGrand B. Cannon, Burlington, Vt.; calved May 6, 1880, sire Clover 101, dam Maggie, imported in dam Elsie by James Lawrence, Groton, Mass.

Guernsey Heifers One Year Old.

Howard G. White, Syracuse, N. Y.; first prize, twenty dollars, Bonita, light orange fawn and white, bred by L. W. Ledyard, Cazenovia, N. Y.; calved July 30, 1881, sire Powhattan 144, dam Maggie, imported in dam Elsie by James Lawrence, Groton, Mass., in May, 1878.

L. W. Ledyard, Cazenovia, N. Y.; second prize, ten dollars, Serpolette, orange fawn and white, bred by Augustus Ward, Farrington, Conn.; calved March 19, 1881, sire Dom Pedro 52, dam Le Gelé, imported by M. C. Weld, New York, April, 1876.

Guernsey Heifer Calves over Five Months Old.

L. W. Ledyard, Cazenovia, N. Y.; first prize, ten dollars, Fillette, orange fawn and white, bred by E. W. and H. W. Tillotson, Farmington, Conn.; calved October 16, 1881, sire Coronet 149, dam Mouchette, imported by M. C. Weld, New York, April 14, 1876.

MILCH COWS.

Milch Cows of any Breed.

Smiths & Powell, Syracuse, N. Y.; first prize, thirty dollars, Holstein cow, Aaggie, black and white, bred by J. Wit Az, Midwoud, North Holland; calved April 1, 1874.

Smiths & Powell, Syracuse, N. Y.; second prize, fifteen dollars, Holstein cow, Lady Netherland, black and white, bred by A. C. Koning, Beemster, North Holland; calved March 10, 1874.

OXEN, STEERS AND FAT CATTLE.

Fat Oxen over Four Years Old.

Erastus Corning, Albany, N. Y.; first prize, thirty dollars, Pierre (Hereford), red with white face, bred by exhibitor; calved September, 1877, sire Comus (4457), dam Princess 3rd by Major, gr. d. Princess 2nd by Washington (5134).

Erastus Corning, Albany, N. Y.; second prize, fifteen dollars, George (Hereford), red with white face, bred by exhibitor; calved August, 1877, sire Comus (4457), dam Marchioness 2nd by Major, gr. d. Marchioness by Washington (5134).

Fat Steers under Four Years Old.

George Ayrault, Poughkeepsie, N. Y.; first prize, thirty dollars, grade shorthorn, red and white.

M. B. Ritter, Waterloo, N. Y.; second prize, fifteen dollars, grade shorthorn, red and white, bred by exhibitor; calved March 20, 1879, sire Prince of the River, 12677, dam threequarters shorthorn, by Royal Duke of Waterloo, 18252.

Fat Cows over Four Years Old.

George Ayrault, Poughkeepsie, N. Y.; first prize, thirty dollars, grade shorthorn, roan.

George Ayrault, Jr., Poughkeepsie, N. Y.; second prize, fifteen dollars, grade shorthorn, white.

Fat Heifers under Four Years Old.

George Ayrault, Jr., Poughkeepsie, N. Y.; first prize, thirty dollars, grade shorthorn, red and white.

George Ayrault, Poughkeepsie, N. Y.; second prize, fifteen dollars, grade shorthorn, red and white.

Extra Awards.

Frank B. Redfield, Batavia, N. Y.; one hundred dollars for exhibition of Polled Angus, or Aberdeen cattle.

Zerah Rider, Cambridge, N. Y., fifty dollars for exhibition of Swiss cattle.

HORSES.

Breeding and Growing Stock.

Special Prize for the Best Draught or Agricultural Stallion, of any Age or Breed.

Smiths & Powell, Syracuse, N. Y.; special prize, one hundred dollars, Standard Bearer, brown, foaled June 7, 1880, imported by exhibitors, sire Lord Nelson, dam Jean by Clydesdale Jock (1415), gr. d. Nancy by Prince of Wales (676).

Clydesdales and their Crosses.

Stallions over Four Years Old.

Christian Sitterly, Palatine, N. Y.; first prize, fifty dollars, MacHenry, dark bay, 16.2, six years, bred by exhibitor, sire Clyde, dam Dolly by George, gr. d. by Rysdyk's Hambletonian.

Smiths & Powell, Syracuse, N. Y.; second prize, twenty-five dollars, Climax, chestnut, foaled April 14, 1878, sire King of the East, dam by Henderson's Gray Clydesdale.

Stallions Three Years Old.

A. S. Cook, Binghamton, N. Y.; first prize, forty dollars, British Champion, Jr., black, 16.2, foaled July 20, 1879, sire British Champion, dam by imported Cumberland, gr. d. by imported Marquis of Clydesdale.

Stephen Carpenter, Higginsville, N. Y.; second prize, twenty dollars, Snowflake, iron gray, 15.1, bred by exhibitor, foaled May 26, 1879, sire Sir Franklin, imported by E. W. Sheppard, Meadville, Penn.

Stallions Two Years Old.

Smiths & Powell, Syracuse, N. Y.; first prize, thirty dollars, Standard Bearer, brown, foaled June 7, 1880, imported by exhibitors, sire Lord Nelson, dam Jean by Clydesdale Jock (1415), gr. d. Nancy by Prince of Wales (676).

Mares over Four Years Old.

Smiths & Powell, Syracuse, N. Y.; first prize, fifty dollars, Queen of Scots, bay, foaled in 1872, sire Cannobie, imported, dam by imported Netherby.

Fillies Three Years Old.

Smiths & Powell, Syracuse, N. Y.; first prize, forty dollars, Jess, bay, foaled in 1879, sire King of the East, dam Young Giantess by Campsie Jock, gr. d. by Young Robin Hood.

Fillies Two Years Old.

Smiths & Powell, Syracuse, N. Y.; first prize, thirty dollars, Highland Belle, bay, foaled in 1880, sire Ontario Chief, imported, dam Queen of Scots by Cannobie, imported, gr. d. by Old Netherby.

Fillies One Year Old.

Smiths & Powell, Syracuse, N. Y.; first prize, twenty dollars, Princess, black, foaled July 11, 1881, sire Prince of Blacklaw, dam Lady of the Manor by Lord of the Manor, gr. d. Lady Wellington by Duke of Wellington.

Percherons and their Crosses.

Stallions over Four Years Old.

Howard G. White, Syracuse, N. Y.; first prize, fifty dollars, Raspail, gray, 17, seven years, bred by P. Sagoy, Nogent-le-Rotrou, France, imported by exhibitor, sire Pierrot, dam Couronne.

Wheeler & Mathews, Cedarville, N. Y.; second prize, twenty-five dollars, Belleview, dapple grey, 16.2, five years, imported in 1877 by M. W. Dunham, Wayne, Illinois.

Stallions Two Years Old.

John W. Aikin, Scipio, N. Y.; first prize, thirty dollars, De-ce-De, dark grey, sire Success, dam by French Emperor.

Stallions One Year Old.

Wheeler & Mathews, Cedarville, N. Y.; first prize, twenty dollars, Commodore, brown, foaled May 7, 1881.

John W. Aikin, Scipio, N. Y.; second prize, ten dollars, Commodore, dark brown, sire Aikin's Duke de Chartres, dam by English Yeoman.

Mares over Four Years Old.

Howard G. White, Syracuse, N. Y.; first prize, fifty dollars, Chatton, grey, 16, six years, bred by Goupil Edree, Nogent-le-Rotrou, France, imported by exhibitor, sire Le Cœur Joly, dam Pauline.

Howard G. White, Syracuse, N. Y.; second prize, twenty-five dollars, Rustique, gray, 16.2, five years, bred by H. Guibert, Nogent-le-Rotrou, France, imported by exhibitor, sire Margot, dam Rustique.

Fillies Two Years Old.

John W. Aikin, Scipio, N. Y.; first prize, thirty dollars, Minnie B., black, sire Pride, imported.

Fillies One Year Old.

Wheeler & Mathews, Cedarville, N. Y.; first prize, twenty dollars, Florence, gray, foaled April 28, 1881.

John W. Aikin, Scipio, N. Y.; second prize, ten dollars, Betsy, gray, sire Aikin's Duke of Homer, dam by Norman Leslie, gr. d. by imported Louise Phillippe.

THOROUGHBREDS AND THEIR CROSSES.

Including Messengers of all branches, Clays, Morgans, Coachers and all families founded upon, or more or less improved by, English or Eastern blood.

Special Prize for the Best Stallion of any Age.

Walcott Van de Bogart, Batavia, N. Y.; special prize, one hundred and fifty dollars, Blue Danube, bay, 16, five years, bred at Woodburn Farm, Ky., sire Woodford Mambrino, dam Cracovienne, by Alexander's Abdallah, gr. d. by Cracker, son of Boston.

Stallions over Five Years Old.

Wolcott Van de Bogart, Batavia, N. Y.; first prize, seventy dollars, Blue Danube, bay, 16, five years, bred at Woodburn Farm, Ky., sire Woodford Mambrino, dam Cracovienne, by Alexander's Abdallah, gr. d. by Cracker, son of Boston.

Charles O. Shepard, Mount Morris, N. Y.; second prize, thirty-five dollars, Zetland, dark bay, 16, nine years, sire Fireaway, dam by Ward's Venture.

Stallions Four Years Old.

D. Gardner, Utica, N. Y.; first prize, sixty dollars, Nisi Prius, bay, 15.3, bred by E. W. Kittridge, foaled April 8, 1878, sire Solicitor, dam Glencoria, by Rysdyk's Hambletonian, gr. d. by Glencoe, imported.

Edward Caney, Richfield Springs, N. Y.; second prize, thirty dollars, Idlewild, rosewood bay, 16, bred by George F. Stevens, Ilion, N. Y., sire Administrator, by Rysdyk's Hambletonian, dam by Iron Duke, gr. d. by Edwin Forrest.

Stallions Three Years Old.

N. P. Pond, Rochester, N. Y.; first prize, fifty dollars, Thornwood, bay, 15.2½, bred by H. M. Bugher, Woodland Farm, Glendale, Ohio, sire Woodlawn, by

Hero of Thorndale, dam Mag Strader, by Mambrino Clay, son of Kentucky Clay, gr. d. Susan Loder, by Daniel Boone, son of Tom Crowder.

W. H. Powell, Hopewell Centre, N. Y.; second prize, twenty-five dollars, bay, bred by exhibitor, sire Mambrino Hambletonian, dam Kitty Clay, by Potter's Clay.

Stallions Two Years Old.

Smiths & Powell, Syracuse, N. Y.; first prize, forty dollars, Chancellor, bay, foaled March 24, 1880, sire Reveler, dam Ambra, by Rysdyk's Bellfounder, gr. d. Clip, by Latourette's Bellfounder.

James K. P. Pine, Troy, N.Y.; second prize, twenty dollars, Warwick, black, 15, foaled April 25, 1880, sire American Ethan, dam by Stewart's Hambletonian, gr. d. by Lone Star, son of Hill's Black Hawk.

Stallions One Year Old.

Smiths & Powell, Syracuse, N. Y.; first prize, thirty dollars, James, bay, foaled April 16, 1881, sire Challenger, dam Lady Bonner, by Robert Bonner.

A. F. Barnes, Farmington, N. Y.; second prize, fifteen dollars, Delmont, light chestnut, bred by exhibitor, foaled September 2, 1880, sire Tremont, dam Flora by Long Island, gr. d. by Nimrod (son of American Eclipse).

Mares over Five Years Old.

N. B. Mann, Mannsville, N. Y.; first prize, sixty dollars, Golden Slipper, chestnut, 15.3, six years, sire Ira Allen, dam by Andrew Jackson.

L'Vander C. Hess, Fenner, N. Y.; second prize, thirty dollars, the Robinson Mare, golden chestnut, bred by James Robinson, Fenner, N. Y., foaled 1868, sire Major Anderson, dam by Warren's Messenger.

Fillies Three Years Old.

Smiths & Powell, Syracuse, N. Y.; first prize, forty dollars, Gazelle, black, foaled April 25, 1879, sire Reveler, dam Eva, by Satellite, gr. d. by a son of imported Consternation.

John S. Kent, Alder Creek, N. Y.; second prize, twenty dollars, Maria, bay, 15-2.

Fillies One Year Old.

Wm. H. Pearce, New Hartford, N. Y.; first prize, twenty dollars, bay, bred by exhibitor.

SHETLAND PONIES.

Stallions over Two Years Old.

H. R. C. Watson, West Farms, N. Y.; first prize, twenty dollars, Jim, black, 11, nine years, bred by William Watson, West Farms, N. Y.

Stallions under Two Years Old.

H. R. C. Watson, West Farms, N. Y.; first prize, twenty dollars, Chester, brown and white, 9.3, one year, bred by exhibitor, sire Montreal, dam Daisy.

Mares over Two Years Old.

H. R. C. Watson, West Farms, N. Y.; first prize, twenty dollars, Madge, black and white, 12, seven years, bred by James Richardson, Lachine, Canada.

Fillies under Two Years Old.

H. R. C. Watson, West Farms, N. Y.; first prize, twenty dollars; Patience, bay, 9.3, one year, bred by exhibitor, sire Montreal, dam Jeannie.

HARNESS AND SADDLE HORSES.

Draught Pairs.

George Young, Utica, N. Y.; first prize, fifty dollars, Peter and Jim, black geldings, 16, six and seven years.

D. M. Osborne & Co., Auburn, N. Y.; second prize, twenty-five dollars, gray and bay.

Coach Pairs.

H. B. Coon, Bridgewater, N. Y.; first prize, fifty dollars, dark bay geldings, 16, five years.

J. D. Remington, Auburn, N. Y.; second prize, twenty-five dollars, blacks, 16.2, five and six years.

Phæton Pairs.

George Young, Utica, N. Y.; first prize, fifty dollars, Jim and Ned, black geldings, 15.2, eight years.

N. B. Mann, Mannsville, N. Y.; second prize, twenty-five dollars, Charley J. and Rarus, chestnut, 15.2, foaled June, 1879.

Coupe Horses.

Smiths & Powell, Syracuse, N. Y.; first prize, thirty dollars, Frank, bay gelding, six years.

George I. Wheeler, Rome, N. Y.; second prize, fifteen dollars, chestnut, 16.2, five years.

Roadsters.

A. M. Parker, Trenton, N. Y.; first prize, thirty dollars, Harry, black, 16, six years, sire Signal, dam by Blucher.

William H. Schuyler, Utica, N. Y.; second prize, fifteen dollars, gray, 15.3, six years.

Saddle Horses.

H. Bowen, Medina, N. Y.; first prize, thirty dollars, brown gelding, 15.2, six years.

H. R. C. Watson, West Farms, N. Y.; second prize, fifteen dollars, Olivette, brown, 15, six years, sire Jupiter Star.

Ponies (under 13 *hands) Broken to Harness or Saddle.*

H. R. C. Watson, West Farms, N. Y.; first prize, twenty dollars, Montreal, piebald, 11, four years, bred by James Richardson, Lachine, Canada.

SHEEP, SWINE AND POULTRY.

LONG WOOLED SHEEP — LEICESTERS.

Rams over Two Years Old.

William S. Moore, Jr., Mount Upton, N. Y.; first prize, twenty dollars, bred by John Clark.

Rams One Year Old.

W. L. & W. Rutherford, Waddington, N. Y.; first prize, twenty dollars, bred by exhibitors.

Ram Lambs.

William S. Moore, Jr., Mount Upton, N. Y.; first prize, ten dollars, bred by exhibitor.

W. L. & W. Rutherford, Waddington N. Y.; second prize, five dollars, bred by exhibitors

Pens of Ewes over Two Years Old.

W. L. & W. Rutherford, Waddington, N. Y.; first prize, twenty dollars, bred by exhibitors.

William S. Moore, Jr., Mount Upton, N. Y.; second prize, ten dollars, bred by John Clark.

Pens of Yearling Ewes.

W. L. & W. Rutherford, Waddington, N. Y.; first prize, twenty dollars, bred by exhibitors.

Pens of Ewe Lambs.

W. L. & W. Rutherford, Waddington, N. Y.; first prize, ten dollars, bred by exhibitors.

COTSWOLDS.

Rams over Two Years Old.

George Ingersoll, Charleston, N. Y.; first prize, twenty dollars.

F. S. Peer, East Palmyra, N. Y.; second prize, ten dollars, bred by Robert Jacobs, Bedford, England.

Rams One Year Old.

George Ingersoll, Charleston, N. Y. ; first prize, twenty dollars.

George Ingersoll, Charleston, N. Y. ; second prize, ten dollars.

Ram Lambs.

George Ingersoll, Charleston, N. Y.; first prize, ten dollars.

F. S. Peer, East Palmyra, N. Y.; second prize, five dollars, bred by exhibitor.

Pens of Ewes over Two Years Old.

George Ingersoll, Charleston, N. Y.; first prize, twenty dollars.

F. S. Peer, East Palmyra, N. Y.; second prize, ten dollars, bred by Robert Jacobs, Bedford, England.

Pens of Yearling Ewes.

George Ingersoll, Charleston, N. Y.; first prize, twenty dollars.

F. S. Peer, East Palmyra, N. Y.; second prize, ten dollars, bred by Charles Barton, Fifield, England.

Pens of Ewe Lambs.

F. S. Peer, East Palmyra, N. Y.; first prize, ten dollars, bred by Charles Barton.

George Ingersoll, Charleston, N. Y.; second prize, five dollars.

MIDDLE-WOOLED SHEEP — SOUTHDOWNS.

Rams over Two Years Old.

John Hobart Warren, Hoosick Falls, N. Y.; first prize, twenty dollars, bred by John D. Wing.

Rams One Year Old.

John Hobart Warren, Hoosick Falls, N. Y.; first prize, twenty dollars, bred by Lord Walsingham.

Daniel B. Haight, Dover Plains, N. Y.; second prize, ten dollars, bred by Robert Marsh.

Ram Lambs.

Daniel B. Haight, Dover Plains, N. Y.; first prize, ten dollars, bred by exhibitor.

John Hobart Warren, Hoosick Falls, N. Y.; second prize, five dollars, bred by exhibitor.

Pens of Ewes over Two Years Old.

Daniel B. Haight, Dover Plains, N.Y.; first prize, twenty dollars, bred by exhibitor.

Daniel B. Haight, Dover Plains, N.Y.; second prize, ten dollars, bred by exhibitor.

Pens of Yearling Ewes.

Daniel B. Haight, Dover Plains, N.Y.; first prize, twenty dollars, bred by exhibitor.

John Hobart Warren, Hoosick Falls, N. Y.; second prize, ten dollars, bred by exhibitor.

Pens of Ewe Lambs.

John Hobart Warren, Hoosick Falls, N. Y.; first prize, ten dollars, bred by exhibitor.

Daniel B. Haight, Dover Plains, N. Y.; second prize, five dollars, bred by exhibitor.

SHROPSHIRES.

Rams over Two Years Old.

Charles D. Sickler, Malta, N. Y.; first prize, twenty dollars, Earl of Strathmore, bred by M. H. Cochrane, Canada.

E. B. Hawks, Wells Bridge, N. Y.; second prize, ten dollars.

Rams One Year Old.

George Ingersoll, Charleston, N. Y.; first prize, twenty dollars.

Ram Lambs.

Charles D. Sickler, Malta, N. Y.; first prize, ten dollars, True-Type, bred by exhibitor, sire and dam imported.

George Ingersoll, Charleston, N. Y.; second prize, five dollars.

Pens of Ewes over Two Years Old.

Charles D. Sickler, Malta, N. Y.; first prize, twenty dollars, bred by B. Harlescolt, England.

Charles D. Sickler, Malta, N. Y.; second prize, ten dollars, bred by B. Harlescolt, England.

Pens of Yearling Ewes.

Charles D. Sickler, Malta, N. Y.; first prize, twenty dollars, bred by exhibitor.

Charles D. Sickler, Malta, N. Y.; second prize, ten dollars, bred by exhibitor.

Pens of Ewe Lambs.

Charles D. Sickler, Malta, N. Y.; first prize, ten dollars, bred by exhibitor.

George Ingersoll, Charleston, N. Y.: second prize, five dollars.

HAMPSHIRES.

Rams over Two Years Old.

Henry Metcalf, Canandaigua, N. Y.; first prize, twenty dollars, bred by exhibitor.

W. C. & L. P. Smith, Penn Yan, N. Y.; second prize, ten dollars, bred by Henry Metcalf.

Rams One Year Old.

W. C. & L. P. Smith, Penn Yan, N. Y.; first prize, twenty dollars, bred by exhibitors.

Henry Metcalf, Canandaigua, N. Y.; second prize, ten dollars, bred by exhibitor.

Ram Lambs.

Henry Metcalf, Canandaigua, N. Y.; first prize, ten dollars, bred by exhibitor.

W. C. & L. P. Smith, Penn Yan, N. Y.; second prize, five dollars, bred by exhibitors.

Pens of Ewes over Two Years Old.

Henry Metcalf, Canandaigua, N. Y.; first prize, twenty dollars, bred by exhibitor

W. C. & L. P. Smith, Penn Yan, N. Y.; second prize, ten dollars, bred by Henry Metcalf.

Pens of Yearling Ewes.

Henry Metcalf, Canandaigua, N. Y.; first prize, twenty dollars, bred by exhibitor.

W. C. & L. P. Smith, Penn Yan, N. Y.; second prize, ten dollars, bred by exhibitors.

Pews of Ewe Lambs.

Henry Metcalf, Canandaigua, N. Y.; first prize, ten dollars, bred by exhibitor.

W. C. & L. P. Smith, Penn Yan, N. Y.; second prize, five dollars, bred by exhibitors.

FINE-WOOLED SHEEP.

Merinos Bred for Fineness of Wool.

Rams over Three Years Old.

Warren J. Tyler & Son, South Byron, N. Y.; first prize, twenty dollars, bred by C. R. Jones, Hubbardton, Vt.

Ram Lambs.

Warren J. Tyler & Son, South Byron, N. Y.; first prize, ten dollars, bred by exhibitors.

R. M. Remington, Auburn, N. Y.; second prize, five dollars.

Pens of Yearling Ewes.

R. M. Remington, Auburn, N. Y.; second prize, ten dollars.

Pens of Ewe Lambs.

R. M. Remington, Auburn, N. Y.; second prize, five dollars.

BRED FOR WEIGHT OF FLEECE.

Rams over Three Years Old.

Warren J. Tyler & Son, South Byron, N. Y.; first prize, twenty dollars, bred by S. B. Lusk, Batavia, N. Y.

Rams Two Years Old.

Davis Cossitt, Onondaga, N. Y.; first prize, twenty dollars.

Rams One Year Old.

Davis Cossitt, Onondaga, N. Y.; first prize, twenty dollars.

C. D. & C. Kenyon, Centre White Creek, N. Y.; second prize, ten dollars, bred by D. W. Percy.

Ram Lambs.

C. D. & C. Kenyon, Centre White Creek, N. Y.; first prize, ten dollars, bred by exhibitors.

Warren J. Tyler & Son, South Byron, N. Y.; second prize, five dollars, bred by exhibitors.

Pens of Ewes over Three Years Old.

Warren J. Tyler & Son, South Byron, N. Y.; first prize, twenty dollars, bred by exhibitors.

Pens of Ewes Two Years Old.

Davis Cossitt, Onondaga, N. Y.; first prize, twenty dollars.

Warren J. Tyler & Son, South Byron, N. Y.; second prize, ten dollars, bred by exhibitors.

Pens of Yearling Ewes.

Davis Cossitt, Onondaga, N. Y.; first prize, twenty dollars.

J. & R. C. James, Eagle Bridge, N. Y.: second prize, ten dollars.

Pens of Ewe Lambs.

Davis Cossitt, Onondaga, N. Y.; first prize, ten dollars.

Warren J. Tyler & Son, South Byron, N. Y.; second prize, five dollars, bred by exhibitors.

BRED FOR LENGTH OF STAPLE.

Rams over Three Years Old.

Warren J. Tyler & Son, South Byron, N. Y.; first prize, twenty dollars, bred by C. R. Jones, Hubbardton, Vt.

C. D. & C. Kenyon, Centre White Creek, N. Y.; second prize, ten dollars, bred by exhibitors.

Rams Two Years Old.

William S. Moore, Jr., Mount Upton, N. Y.; second prize, ten dollars, bred by H. O. Moore.

Rams One Year Old.

Davis Cossitt, Onondaga, N. Y.; first prize, twenty dollars.

C. D. & C. Kenyon, Centre White Creek, N. Y.; second prize, ten dollars, bred by Charles E. Smith.

Ram Lambs.

Warren J. Tyler & Son, South Byron, N. Y. ; first prize, ten dollars, bred by exhibitors.

William S. Moore, Jr., Mount Upton, N. Y.; second prize, five dollars, bred by exhibitor.

Pens of Ewes over Three Years Old.

Warren J. Tyler & Son, South Byron, N. Y.; first prize, twenty dollars, bred by exhibitors.

C. D. & C. Kenyon, Centre White Creek, N. Y.; second prize, ten dollars, bred by exhibitors.

Pens of Ewes Two Years Old.

Davis Cossitt, Onondaga, N. Y.; first prize, twenty dollars.

Warren J. Tyler & Son, South Byron, N. Y.; second prize, ten dollars, bred by exhibitors.

Pens of Yearling Ewes.

Davis Cossitt, Onondaga, N. Y.; first prize, twenty dollars.

Warren J. Tyler & Son, South Byron, N. Y.; second prize, ten dollars, bred by exhibitors.

Pens of Ewe Lambs.

Warren J. Tyler & Son, South Byron, N. Y.; first prize, ten dollars, bred by exhibitors.

C. D. & C. Kenyon, Centre White Creek, N. Y.; second prize, five dollars, bred by exhibitors.

SWINE.

LARGE WHITE BREED.

Herd Prize.

Charles Spice, Utica, N. Y.; small gold medal.

Boars over One Year Old.

Charles Spice, Utica, N. Y.; first prize, twenty dollars.

E. W. Davis, Oneida, N. Y.; second prize, ten dollars, Mars, bred by exhibitor.

Boars under One Year Old.

E. W. Davis, Oneida, N. Y.; first prize, twenty dollars, Vulcan, bred by exhibitor.

T. R. Proctor, Utica, N. Y.; second prize, ten dollars, bred by exhibitor.

Sows over One Year Old.

Charles Spice, Utica, N. Y.; first prize, twenty dollars.

E. W. Davis, Oneida, N. Y.; second prize, ten dollars, Maid of Athens, bred by exhibitor.

Sows under One Year Old.

Charles Spice, Utica, N. Y.; first prize, twenty dollars.

POLAND CHINA.

Herd Prize.

G. H. Bell, Rome, N. Y.; small gold medal.

Boars over One Year Old.

G. H. Bell, Rome, N. Y.; first prize, twenty dollars, Roman Chief, bred by exhibitor.

David Smith, Rome, N. Y.; second prize. ten dollars, Royal George, bred by G. H. Bell, Rome, N. Y.; sire Marshland Boy, dam Spotted Beauty.

Boars under One Year Old.

G. H. Bell, Rome, N. Y.; first prize, twenty dollars, Oxford Lad, bred by James Greenwood, Jr.

Sows over One Year Old.

G. H. Bell, Rome, N. Y.; first prize, twenty dollars, Bell's Favorite, bred by exhibitor.

John Bell, Rome, N. Y.; second prize, ten dollars, Maid of Lowell, bred by exhibitor.

Sows under One Year Old.

G. H. Bell, Rome, N. Y.; first prize, twenty dollars, Bell's Favorite 3rd, bred by exhibitor.

John Bell, Rome, N. Y.; second prize, ten dollars, Maid 2nd, bred by exhibitor.

SMALL WHITE BREED.

Herd Prize.

T. R. Proctor, Utica, N. Y.; small gold medal.

Boars over One Year Old.

T. R. Proctor, Utica, N. Y.; first prize, twenty dollars, Lord John, bred by H. H. Ingersoll, Owego, N. Y.; sire Crown Prince, dam Princess IV, by Duke of Yorkshire, imported.

T. R. Proctor, Utica, N. Y.; second prize, ten dollars, Diomede, bred by exhibitor, sire Rinaldo, dam Queen III, by King John III.

Boars under One Year Old.

T. R. Proctor, Utica, N. Y.; first prize, twenty dollars, Proctor's John, bred by exhibitor, sire King John XVI, dam Queen III, by King John III.

Ensign & Brown, Jeddo, N. Y.; second prize, ten dollars, bred by exhibitors.

Sows over One Year Old.

Ensign & Brown, Jeddo, N. Y.; first prize, twenty dollars, Queen Bess IV.

T. R. Proctor, Utica, N. Y.; second prize, ten dollars, Queen IV, bred by H. H. Ingersoll, Owego, N. Y.; sire King John III, dam Queen, by imported Duke of Yorkshire.

Sows under One Year Old.

T. R. Proctor, Utica, N. Y.; first prize, twenty dollars, Proctor's Duchess, bred by exhibitor, sire King John XVI, dam Marchioness B., by King George.

Ensign & Brown, Jeddo, N. Y.; second prize, ten dollars, Eugenia.

BERKSHIRES.

Herd Prize.

T. R. Proctor, Utica, N. Y.; small gold medal.

Boars over One Year Old.

T. R. Proctor, Utica, N. Y.; first prize, twenty dollars, Emperor III, bred by A. A. McArthur, Lobo, Ontario, sire Norton's Smithereen, dam Ridge Sallie XII.

T. R. Proctor, Utica, N. Y.: second prize, ten dollars, Oxford Reserve, bred by John Snell's Sons, Edmonton, Ontario, sire Royal Maybreeze, dam Sally Oxford, by Oxford.

Boars under One Year Old.

T. R. Proctor, Utica. N. Y.: first prize, twenty dollars, Proctor's Castor, bred by Arthur Stewart, England, sire King Birt, dam Lady Derby, by Prodigal.

Oneida Community, limited, Community, N. Y.: second prize, ten dollars, Count of Oneida, bred by T. R. Proctor, sire Oxford Reserve, dam Night Flower.

Sows over One Year Old.

T. R. Proctor, Utica, N. Y.; first prize, twenty dollars, Queen of Utica, bred by John Snell's Sons, Edmonton, Ontario, sire Royal Hope, dam Cantata, by Robin Hood.

T. R. Proctor, Utica, N. Y.; second prize, ten dollars, Clarice Clermont, bred by John Snell's Sons, Edmonton, Ontario, sire Royal Hope, dam Constance Clermont, by Windermere.

Sows under One Year Old.

T. R. Proctor, Utica, N. Y.; first prize, twenty dollars, Proctor's Lady Oxford, bred by exhibitor, sire Oxford Reserve, dam Night Flower, by Linden Cardinal.

T. R. Proctor, Utica, N. Y.; second prize, ten dollars, Proctor's Oxford Girl, bred by exhibitor, sire Oxford Reserve, dam Night Flower, by Linden Cardinal.

Essex.

Boars over One Year Old.

J. S. Woodward, Lockport, N. Y.; first prize, twenty dollars.

Sows over One Year Old.

J. S. Woodward, Lockport, N. Y.; first prize, twenty dollars.

Cows under One Year Old.

J. S. Woodward, Lockport, N. Y.; first prize, twenty dollars.

POULTRY.

Asiatics.

Light Brahmas.

J. R. Draper, Troy, N. Y.; first prize, five dollars, young, bred by exhibitor.

Newton Adams, Utica, N. Y.; second prize, three dollars.

Dark Brahmas.

Newton Adams, Utica, N. Y.; first prize, five dollars.

Newton Adams, Utica, N. Y.; second prize, three dollars.

Buff, Lemon or Cinnamon Cochins.

D. A. Carter, Utica, N. Y.; first prize, five dollars.

D. G. Ross, Ilion, N. Y.; second prize, three dollars, young.

Partridge or Grouse Cochins.

B. D. Sarr, Marcellus Falls, N. Y.; first prize, five dollars.
B. D. Sarr, Marcellus Falls, N. Y.: second prize, three dollars.

White Cochins.

C. L. G. Blessing, Slingerlands, N. Y.; first prize, five dollars.
William H. Seeger, Colliers, N. Y.; second prize, three dollars, bred by exhibitor.

Black Cochins.

William H. Underwood, East Scott, N. Y.; second prize, three dollars, young.

DORKINGS.

Colored Dorkings.

R. P. Wolcott, Holland Patent, N. Y.; first prize, five dollars.
R. P. Wolcott, Holland Patent, N. Y.; second prize, three dollars, young.

Silver Gray Dorkings.

N. Barnes & Son, New Hartford, N. Y.; first prize, five dollars.
J. M. Seymour, Clark's Mills, N. Y.; second prize, three dollars.

White Dorkings.

William H. Underwood, East Scott, N. Y.; first prize, five dollars, young.
William H. Underwood, East Scott, N. Y.; second prize, three dollars.

AMERICAN.

Dominiques.

Jones Wilcox, East Chatham, N. Y.; first prize, five dollars, young.
Jones Wilcox, East Chatham, N. Y.; second prize, three dollars.

Plymouth Rocks.

Newton Adams, Utica, N. Y.; first prize, five dollars.
Stephen Treen, Utica, N. Y.; second prize, three dollars, six months, bred by exhibitor.

HAMBURGHS.

Golden Spangled.

Newton Adams, Utica, N. Y.; first prize, five dollars.
O. Howland & Son, Auburn, N. Y.; second prize, three dollars.

Silver Spangled.

Jones Wilcox, East Chatham, N. Y.; first prize, five dollars, young.
Jones Wilcox, East Chatham, N. Y.; second prize, three dollars.

Gold Penciled.

O. Howland & Son, Auburn, N. Y.; first prize, five dollars.
William H. Underwood, East Scott, N. Y.; second prize, three dollars.

Silver Penciled.

William H. Underwood, East Scott, N. Y.; first prize, five dollars.
William H. Underwood, East Scott, N. Y.; second prize, three dollars, young.

Black.

Jones Wilcox, East Chatham, N. Y.; first prize, five dollars.
Jones Wilcox, East Chatham, N. Y.; second prize, three dollars.

SPANISH.

Black Spanish.

D. A. Carter, Utica, N. Y.; second prize, three dollars.

White Leghorns.

Newton Adams, Utica, N. Y.; first prize, five dollars, young.
Newton Adams, Utica, N. Y.; second prize, three dollars.

Brown Leghorns.

Jones Wilcox, East Chatham, N. Y.; first prize, five dollars, young.
Jones Wilcox, East Chatham, N. Y.; second prize, three dollars, young.

Black Leghorns.

Worley C. Moat, Amsterdam, N. Y.; second prize, three dollars.

Dominique Leghorns.

Jones Wilcox, East Chatham, N. Y.; first prize, five dollars, young.
Jones Wilcox, East Chatham, N. Y.; second prize, three dollars, young.

FRENCH.

Houdans.

M. Ryan, Utica, N. Y.; first prize, five dollars, young.
M. Ryan, Utica, N. Y.; second prize, three dollars.

Creve-Cœurs.

J. M. Seymour, Clark's Mills, N. Y.; first prize, five dollars.

La Fleche.

J. M. Seymour, Clark's Mills, N. Y.; second prize, three dollars.

POLISH.

Black Polish.

William H. Underwood, East Scott, N. Y.; first prize, five dollars.
D. A. Carter, Utica, N. Y.; second prize, three dollars.

White Polish.

William H. Underwood, East Scott, N. Y.; first prize, five dollars, young.

Golden Polish.

William H. Underwood, East Scott, N. Y.; first prize, five dollars.
William H. Underwood, East Scott, N. Y.; second prize, three dollars, young.

Silver Polish.

O. Howland & Son, Auburn, N. Y.; first prize, five dollars.

GAMES.

Black-breasted Red.

Worley C. Moat, Amsterdam, N. Y.; first prize, five dollars.
H. W. Skerritt, Deansville, N. Y.; second prize, three dollars, young, bred by exhibitor.

Silver Duckwing.

F. J. Webber, Syracuse, N. Y.; second prize, three dollars.

White Pile.

William H. Underwood, East Scott, N. Y.; second prize, three dollars.

Other Approved Well-bred Games.

Worley C. Moat, Amsterdam, N. Y.; first prize, five dollars, Georgian.

BANTAMS.

Black-Red Game.

Delos Wentworth, Mohawk, N. Y.; second prize, three dollars.

Red Pile Game.

F. J. Webber, Syracuse, N. Y.; first prize, five dollars.
F. W. Gaylor, Nassau, N. Y.; second prize, three dollars.

White Pile Game.

D. A. Carter, Utica, N. Y.; first prize, five dollars.
F. J. Webber, Syracuse, N. Y.; second prize, three dollars.

Silver Duckwing Game.

D. A. Carter, Utica, N. Y.; first prize, five dollars.
T. R. Proctor, Utica, N. Y.; second prize, three dollars, young

Yellow Duckwing Game.

J. M. Seymour, Clark's Mills, N. Y.; first prize, five dollars.

Silver-laced Sebrights.

O. Howland & Son, Auburn, N. Y.; second prize, three dollars.

Gold-laced Sebrights.

F. J. Webber, Syracuse, N. Y.; first prize, five dollars, young.
Lizzie O. Ledyard, Cazenovia, N. Y.; second prize, three dollars.

Black.

C. L. G. Blessing, Slingerlands, N. Y.; second prize, three dollars.

TURKEYS, ETC.

Bronze Turkeys.

William H. Seeger, Colliers, N. Y.; first prize, five dollars.
George Ayrault, Jr., Poughkeepsie, N. Y.; second prize, three dollars.

White Turkeys.

Jones Wilcox, East Chatham, N. Y.; first prize, five dollars.
William H. Seeger, Colliers, N. Y.; second prize, three dollars.

Pearl Guinea Fowls.

O. Howland & Son, Auburn, N. Y.; first prize, three dollars.
William H. Underwood, East Scott, N. Y.; second prize, two dollars.

White Guinea Fowls.

O. Howland & Son, Auburn, N. Y.; second prize, two dollars.

GEESE.

Toulouse.

William H. Seeger, Colliers, N. Y.; second prize, three dollars.

Embden.

N. Barns & Son, New Hartford, N. Y.; first prize, five dollars.
Thomas W. Jones, Marcy, N. Y.; second prize, three dollars.

White China.

William H. Seeger, Colliers, N. Y.; first prize, five dollars.
William H. Underwood, East Scott, N. Y.; second prize, three dollars.

Brown China.

Jones Wilcox, East Chatham, N. Y.; first prize, five dollars.

Wild.

Thomas W. Jones, Marcy, N. Y.; first prize, five dollars.
C. L. G. Blessing, Slingerlands, N. Y.; second prize, three dollars.

DUCKS.

Rouen.

H. R. C. Watson, West Farms, N. Y.; first prize, five dollars.
Thomas W. Jones, Marcy, N. Y.; second prize, three dollars.

Aylesbury.

William H. Underwood, East Scott, N. Y.; first prize, five dollars.

Cayuga.

J. M. Seymour, Clark's Mills, N. Y.; first prize, five dollars.
O. Howland & Son, Auburn, N. Y.; second prize, three dollars.

Muscovy.

Fred. S. Blessing, Slingerlands, N. Y.; second prize three dollars, white.

Pekin.

Jones Wilcox, East Chatham, N. Y.; first prize, five dollars.
Jones Wilcox, East Chatham, N. Y.; second prize, three dollars.

PIGEONS.

Pouters.

Mathias Cook, Utica, N. Y.; first prize, three dollars, white.
Henry McPherson, Utica, N. Y.; second prize, two dollars, white.

Tumblers.

Mathias Cook, Utica, N. Y.; first prize, three dollars, kites.
Mathias Cook, Utica, N. Y.; second prize, two dollars, black bearded.

Barbs.

Henry McPherson, Utica, N. Y.; first prize, three dollars, yellow.

Turbits, Solid Color.

C. L. G. Blessing, Slingerlands, N. Y.; first prize, three dollars.
Mathias Cook, Utica, N. Y.; second prize, two dollars.

Turbits, Winged.

C. L. G. Blessing, Slingerlands, N. Y.; first prize, three dollars.
C. L. G. Blessing, Slingerlands, N. Y.; second prize, two dollars.

Owls, Solid Color.

Mathias Cook, Utica, N. Y.; first prize, three dollars.
E. D. Withers, Ogdensburg, N. Y.; second prize, two dollars.

Fantails.

Mathias Cook, Utica, N. Y.; first prize, three dollars, white, blue-tailed.
E. D. Withers, Ogdensburg, N. Y.; second prize, two dollars.

Jacobins.

E. D. Withers, Ogdensburg, N. Y.; first prize, three dollars.
C. L. G. Blessing, Slinglerlands, N. Y.; second prize, two dollars.

Blue Rocks.

Mathias Cook, Utica, N. Y.; first prize, three dollars.
C. L. G. Blessing, Slingerlands, N. Y.; second prize, two dollars.

Dragoons.

Mathias Cook, Utica, N. Y.; first prize, three dollars.

Antwerps.

E. D. Withers, Ogdensburg, N. Y.; first prize, three dollars.
Mathias Cook, Utica, N. Y.; second prize, two dollars.

Collections of Pouters.

Henry McPherson, Utica, N. Y.; first prize, five dollars.
Mathias Cook, Utica, N. Y.; second prize, three dollars.

Collections of Tumblers.

Mathias Cook, N. Y.; first prize, five dollars.

Henry McPherson, Utica, N. Y.; second prize, three dollars.

Collections of Pigeons.

Mathias Cook, Utica, N. Y.; first prize, five dollars.

C. L. G. Blessing, Slingerlands, N. Y.; second prize, three dollars.

Collections of Toy Pigeons.

Mathias Cook, Utica, N. Y.; first prize, five dollars.

C. L. G. Blessing, Slingerlands, N. Y.; second prize, three dollars.

RABBITS.

LOP-EARED OR MADAGASCAR.

Self-Colored Bucks.

Stephen Treen, Utica, N. Y.; second prize, two dollars, bred by exhibitor.

Self-Colored Does.

Stephen Treen, Utica, N. Y.; second prize, two dollars, bred by exhibitor.

Broken Colored Bucks.

William A. Treen, Utica, N. Y.; first prize, three dollars.

Broken Colored Does.

William A. Treen, Utica, N. Y.; first prize, three dollars.

COMMON.

Bucks.

Stephen Treen, Utica, N. Y.; first prize, two dollars.

Does.

Stephen Treen, Utica, N. Y.; first prize, two dollars.

INCUBATORS IN OPERATION.

A. W. Halsted, Rye, N. Y.; first prize, ten dollars, Halsted's Patent Centennial Incubator.

ARTIFICIAL MOTHERS.

F. W. Gaylor, Nassau, N. Y.; first prize, ten dollars.

AWARDS FOR IMPLEMENTS, MACHINERY, AND MANUFACTURED ARTICLES

EXHIBITED AT THE FORTY-SECOND ANNUAL CATTLE SHOW AND FAIR OF THE NEW YORK STATE AGRICULTURAL SOCIETY, AT UTICA, 1882.

NOTE.— The letters B. M. denote that a bronze medal was awarded; H. C. (highly commended) that the exhibitor is entitled to a certificate of highest merit; C. (commended) that the exhibitor is entitled to a certificate of merit. The numbers preceding the names are the catalogue numbers.

1739. E. B. Daniels & Co., Odessa, N. Y.; Daniels' plough sulky. H. C.

1740. John Deere Plow Co., Rochester, N. Y.; Gilpin sulky plough. H. C.

1743. The Dowagiac Manufacturing Co., Dowagiac, Mich ; the Warner spring-tooth cultivator, four machines in one, fallow cultivator, double and single corncultivator and seeder. C. M.

1752. Kemp & Burpee Manufacturing Co., Syracuse, N. Y.; Kemp's manure spreader. H. C.

1789½. Onondaga Road Scraper Co., Skaneateles, N. Y.; Onondaga road scraper. C.

1802. J. A. Cross, Fultonville, N. Y.; hay conveyor track and pulleys. H. C.

1818. H. D. Herrington, Tiashoke, N. Y.; potato digger. H. C.

1845. Ames Plow Co., Boston, Mass.; Dr. Bailey sixteen-inch ensilage machine, hand or power. B. M.

1851. H. W. Cornell, Owego, N. Y.; corn-sheller. H. C.

1852. W. W. Crittenden, Phelps, N. Y.; American pneumatic fruit evaporator. H. C.

1859. Johnson & Field, Racine, Wis.; E. A. Egleston, agent, Albion, N. Y.; farm fanning mills. C.

1860. Munson Brothers, Utica, N. Y.; feed mills. H. C.

1867. E. W. Ross & Co., Fulton, N. Y.; Ross's patent fodder and ensilage cutters. H. C.

1872. D. W. Seeley, Albany, N. Y.; Buckman & Seeley's hay and cotton press. B. M.

1872½. Hiram Sibley & Co., Rochester, N. Y.; improved feed gear for feed cutters. H. C.

1880. S. B. Van Duzee & Co., Gouverneur, N. Y.; Bonanza fanning mill and separator. H. C.

1882. Victor Mower Co., Niverville, N. Y.; friction ratchet for use on harvesting machines. C.

1884. Wheeler & Melick Co., Albany, N. Y.; Champion rye thresher and cleaner. H. C.

1888. Alexander, Bradley & Dunning, Syracuse, N. Y.; portable saw-mill. H. C.

1889. J. H. Babcock, Phelps, N. Y.; Babcock's reamer for iron-workers. C.

1891. Childs & Jones, Utica, N. Y.; steam boiler and engine for dairy use. C.

1892. Empire Steam Pump Co., Carthage, N. Y.; steam pumping engine. H. C.

1896. B. W. Payn & Son, Corning, N. Y.; mounted threshing engine. H. C.

1897. Elias C. Schermerhorn, Alder Creek, N. Y.; model of a thirty-block shingle machine. C.

1900. Chapin & Smith, Poultney, Vt.; improved churn-cover. H. C.

1914. N. G. Stebbins, Rome, N. Y.; double-acting bellows for cooling and aerating milk, etc. C.

1915. J. M. Tallman, Utica, N. Y.; the Daniels churn. C.

1920. T. V. Allis Manufacturing Co., Trenton, N. J.; the Buckthorn solid steel barb fencing. C.

1924. Orrin A. Anthony, Mayfield, N. Y.; patent lifting jack. C.

1925. Binghamton Scale Works, Binghamton, N. Y.; hay and other scales. H. C.

1927. Boomer & Boschert Press Co., Syracuse, N. Y.; power cider press. H. C.

1928. Boomer & Boschert Press Co., Syracuse, N. Y.; power apple-grater. C.

1929. Buffalo Scale Co., Buffalo, N. Y.; hay and other scales. H. C.

1934½. J. M. Childs & Co., Utica, N. Y.; for display of dairy and other agricultural implements. H. C.

1935. M. J. Cook, Syracuse, N. Y.; Eureka ash-sifter and safe and garbage barrow. C.

1936. D. J. & C. Davies, Utica, N. Y.; the Howell steam washer. H. C.

1937. D. J. & C. Davies, Utica, N. Y.; the Davies sudsing and rinsing machine. H. C.

1937½. Ballston Manufacturing Co., Ballston, N. Y.; the Magic washer and mop wringer. C.

1938½. Lorillard Cover Co., Hornellsville, N. Y.; box seat cover. H. C.

1940. Ralph L. Gazley, Utica, N. Y.; wheelbarrow with attachments for gardening purposes. C.

1941. Goodell Co., Antrim, N. H.; Bay State parer, corer and slicer. H. C.

1942. Goodell Co., Antrim, N. H.; White Mountain parer, corer and slicer. H. C.

1944. J. M. Gray, Hamilton, N. Y.; snow plough and road scraper combined. H. C.

1955. C. Oyston, Little Falls, N. Y.; nozzle and syringe. C.

1956½. Remington Agricultural Co., Ilion, N. Y.; fire engine. H. C.

1960. Orrin A. Anthony, Mayfield, N. Y.; steel-plated sleigh-shoe. H. C.

1963. L. W. Babcock, Whitesboro, N. Y.; farm wagons. H. C.

1968. William F. Bidwell & Co., Troy, N. Y.; buckboard wagons with Trojan spring. C.

1971. William F. Bidwell & Co., Troy, N. Y.; the Trojan wagon-spring. C.

1972½. C. Russell Ross, Philadelphia, Penn.; extra top jump-seat. H. C.

1976. Bradley & Co., Syracuse, N. Y.; phaeton cart. H. C.

1981. J. M. Childs & Co., Utica, N. Y.; Milburn farm wagons. H. C.

1982. J. M. Childs & Co., Utica, N. Y.; harnesses. H. C.

1983. J. M. Childs & Co., Utica, N. Y.; platform-spring and other light wagons and carriages. B. M.

1984. Cortland Wagon Co., Cortland, N. Y.; general display of their vehicles. Silver medal.

1986. Excelsior Top Co., Cortland, N. Y.; seat cushions and backs and dashboards for wagons. C.

1987. The Harris Manufacturing Co., Hornellsville, N. Y.; Harris' patent carriage seat. C.

1990. Lyons Manufacturing Co., Syracuse, N. Y.; road wagons. H. C.

1992. H. A. Moyer, Syracuse, N. Y.; Moyer's patent side-spring and side-bar wagons. H. C.

1994. Palmatier Spring Co., Leeds, N. Y.; spiral bolster and axle springs for wagons. C.

1996. P. O. Risley, Ilion, N. Y.; light sleighs. H. C.

1997. Rome Spring Wagon Co., Rome, N. Y.; platform spring wagons. H. C.

2001. Short & Smith, Syracuse, N. Y.; Brewster spring top road wagon. H. C.

2007. Short & Smith, Syracuse, N. Y.; light Portland sleigh. C.

2008. G. A. Struppler, Elmira, N. Y.; tire upsetting machine. C.

2012. W. B. Billings, Westmoreland, N. Y.; combination cooker, baker and broiler. C.

2104. L. Dean, Utica, N. Y.; useful and ornamental iron work. H. C.

2106. Austin Devoe, Geneva, N. Y.; wooden telephone. C.

2126. T. F. McBride, Whitestown, N. Y.; feather renovator. H. C.

2130. Price & Knickerbocker, Albany, N. Y.; display of field, garden and flower seeds, etc. H. C.

2131. Hiram Sibley & Co., Rochester, N. Y.; display of agricultural implements, seeds, ornamental grasses, etc. H. C.

FARM PRODUCE.

GRAIN, SEEDS, HOPS, GROWN IN 1882.

White Winter Wheat.

William Watson, Jr., Whitestown, N. Y.; first prize, ten dollars.

W. H. Pearce, New Hartford, N. Y.; second prize, five dollars.

Red Winter Wheat.

E. Van Allen, Bethlehem Centre, N. Y.; first prize, ten dollars.

A. M. Potter, Ridge Mills, N. Y.; second prize, five dollars.

Spring Wheat.

George Campbell, Green's Landing, Penn.; first prize, ten dollars, Russian.

Winter Rye.

George Campbell, Green's Landing, Penn.; first prize, ten dollars, Australian.

E. Van Allen, Bethlehem Centre, N. Y.; second prize, five dollars.

Spring Rye.

Philip C. Van Allen, Slingerlands, N. Y.; first prize, ten dollars.

E. Van Allen, Bethlehem Centre, N. Y.; second prize, five dollars.

White Oats.

George Campbell, Green's Landing, Penn.; first prize, ten dollars, English Challenge.

Myron F. Pierson, Seneca Castle, N. Y.; second prize, five dollars, New Australian.

Black or Gray Oats.

George Campbell, Green's Landing, Penn.; first prize, ten dollars, Black Tartarian.

C. L. G. Blessing, Slingerlands, N. Y.; second prize, five dollars.

Winter Barley.

C. L. G. Blessing, Slingerlands, N. Y.; second prize, five dollars.

Two-rowed Spring Barley.

George Campbell, Green's Landing, Penn.; first prize, ten dollars, Kinver s Chevalier.

Stryker & Jones, Rome, N. Y.; second prize, five dollars.

Four-rowed Spring Barley.

George Campbell, Green's Landing, Penn.; first prize, ten dollars, Canada.

William Harrison Smith, Geneva, N. Y.; second prize, five dollars.

Yellow Indian Corn (shelled).

Philip Van Allen, Slingerlands, N. Y.; first prize, ten dollars.

Large Field Beans.

Fred S. Blessing, Slingerlands, N. Y.; second prize, five dollars.

Small Field Beans.

L. L. French, Richfield Springs, N. Y.; second prize, five dollars.

Large Field Peas.

Philip Van Allen, Slingerlands, N. Y.; second prize, five dollars.

Small Field Peas.

C. L. G. Blessing, Slingerlands, N. Y.; second prize, five dollars.

Buckwheat.

E. Van Allen, Bethlehem Centre, N. Y.; first prize, five dollars.
Washington Garlock, Utica, N. Y.; second prize, three dollars.

Timothy Seed.

Delos Wentworth, Mohawk, N. Y.; first prize, five dollars.
Madison Goulding, Pamelia, N. Y.; second prize, three dollars.

Millet.

E. Van Allen, Bethlehem Centre, N. Y.; first prize, five dollars.
Fred S. Blessing, Slingerlands, N. Y.; second prize, three dollars

Sorghum Seed.

Myron F. Pierson, Seneca Castle, N. Y.; first prize, five dollars, Kerney's improved.
Philip C. Van Allen, Slingerlands, N. Y.; second prize, three dollars.

Seed Ears of Yellow Corn, Eight-rowed.

Fred S. Blessing, Slingerlands, N. Y.; first prize, five dollars.
Philip C. Van Allen, Slingerlands, N. Y.; second prize, three dollars.

Seed Ears Yellow Corn, Twelve-rowed.

Jones Wilcox, East Chatham, N. Y.; first prize, five dollars.
W. A. & J. F. Barns, Kirkland, N. Y.; second prize, three dollars.

Seed Ears White Corn.

Philip C. Van Allen, Slingerlands, N. Y.; first prize, five dollars.
Fred S. Blessing, Slingerlands, N. Y.; second prize, three dollars.

Seed Ears Dent Corn.

George Campbell, Green's Landing, Penn.; first prize, ten dollars.
Myron F. Pierson, Seneca Castle, N. Y.; second prize, five dollars, Pride of the North.

Seed Ears Early Sweet Corn.

E. Van Allen, Bethlehem Centre, N. Y.; first prize, five dollars.
Philip C. Van Allen, Slingerlands, N. Y.; second prize, three dollars.

Seed Ears Late Sweet Corn.

A. M. Potter, Ridge Mills, N. Y.; first prize, five dollars.
Stryker & Jones, Rome, N. Y.; second prize, three dollars.

Hops.

William H. Seeger, Colliers, N. Y.; first prize, ten dollars.

Celery,

T. R. Proctor, Utica, N. Y.; first prize, three dollars.
William A. Treen, Utica, N. Y.; second prize, two dollars.

Cauliflowers.

Michael Torpy, Utica, N. Y.; first prize, three dollars.

Cabbages.

Michael Torpy, Utica, N. Y.; first prize, three dollars.

Lettuce.

T. R. Proctor, Utica, N. Y.; first prize, three dollars.

Turnips.

W. A. & J. F. Barns, Kirkland, N. Y.; first prize, three dollars.
Oscar J. Lewis, Schodack Centre, N. Y.; second prize, two dollars.

Mangolds.

S. A. Cleveland, New Hartford, N. Y.; first prize, three dollars.
Harvey Wood, West Schuyler, N. Y.; second prize, two dollars.

Beets.

Michael Torpy, Utica, N. Y.; first prize, three dollars.

Orange Carrots.

William A Treen, Utica, N. Y.; first prize, three dollars.
Oscar J. Lewis, Schodack Centre, N. Y ; second prize, two dollars.

White Carrots.

Philip C. Van Allen, Slingerlands, N. Y.; first prize, three dollars.
E. Van Allen, Bethlehem Centre, N. Y.; second prize, two dollars

Parsnips.

S. A. Cleveland, New Hartford, N. Y.; first prize, three dollars.
Michael Torpy, Utica, N. Y.; second prize, two dollars.

Salsify.

S. A. Cleveland, New Hartford, N. Y.; first prize, three dollars.
William A. Treen, Utica, N. Y.; second prize, two dollars.

Kohl-Rabi.

Oscar J. Lewis, Schodack Centre, N. Y.; first prize, three dollars.
E. Van Allen, Bethlehem Centre, N. Y.; second prize, two dollars.

Onions.

E. Van Allen, Bethlehem Centre, N. Y.; first prize, three dollars.
Myron F. Pierson, Seneca Castle, N. Y.; second prize, two dollars.

Tomatoes.

Michael Torpy, Utica, N. Y.; first prize, three dollars.
E. Van Allen, Bethlehem Centre, N. Y.; second prize, two dollars.

Egg Plant.

E. Van Allen, Bethlehem Centre, N. Y.; first prize, three dollars.
Oscar J. Lewis, Schodack Centre, N. Y.; second prize, two dollars.

Garden Beans.

Oscar J. Lewis, Schodack Centre, N. Y.; first prize, three dollars.
Myron F. Pierson, Seneca Castle, N. Y.; second prize, two dollars.

Peppers.

E. Van Allen, Bethlehem Centre, N. Y.; first prize, three dollars.
Oscar J. Lewis, Schodack Centre, N. Y.; second prize, two dollars.

Squashes.

Michael Torpy, Utica, N. Y.; first prize, three dollars.
Oscar J. Lewis, Schodack Centre, N. Y.; second prize, two dollars.

Pumpkins.

Philip C. Van Allen, Slingerlands, N. Y.; first prize, three dollars.
Oscar J. Lewis, Schodack Centre, N. Y.; second prize, two dollars.

Sweet Potatoes.

Oscar J. Lewis, Schodack Centre, N. Y.; first prize, three dollars.

Potatoes — Exhibitions of Early Varieties.

Oscar J. Lewis, Schodack Centre, N. Y.; first prize, ten dollars.
Myron F. Pierson, Seneca Castle, N. Y.; second prize, five dollars.

Potatoes — Exhibitions of Late Varieties.

William H. Underwood, East Scott, N. Y.; first prize, ten dollars.
William Hollis, Jr., Sherburne, N. Y.; second prize, five dollars.

Potatoes — Exhibitions of Stock-Feeding Varieties.

Oscar J. Lewis, Schodack Centre, N. Y.; first prize, ten dollars.
Myron F. Pierson, Seneca Castle, N. Y.; second prize, five dollars.

Collections of Vegetables.

Oscar J. Lewis, Schodack Centre, N. Y.; (half) twelve dollars and fifty cents.
E. Van Allen, Bethlehem Centre, N. Y.; (half) twelve dollars and fifty cents.

BUTTER.

Special Prize for the best six packages, not less than 30 lbs. net each, made in the same Creamery or Private Dairy.

West Lisbon Gilt Edge Creamery, Ogdensburg, N. Y, Henry & Erwin, proprietors; fifty dollars.

Packages made in June in Creamery.

George W. Kinney, Stanwix, N. Y.; first prize, thirty dollars.
Risley Bros., New York Mills, N. Y.; second prize, twenty dollars.

Packages made at any time in Creamery.

West Lisbon Gilt Edge Creamery, Ogdensburg, N. Y., Henry & Erwin, proprietors ; first prize, thirty dollars.

Risley Bros., New York Mills, N. Y.; second prize, twenty dollars.

George W. Kinney, Stanwix, N. Y.; third prize, ten dollars.

Packages made in June in Private Dairy.

W. F. Ford, West Davenport, N. Y.; first prize, thirty dollars.

Delos Wentworth, Mohawk, N. Y.; second prize, twenty dollars.

O. B. Sheaf, East Schuyler, N. Y.; third prize, ten dollars.

Packages made at any time in Private Dairy.

A. B. Cary, West Winfield, N. Y.; first prize, thirty dollars.

Morgan Wood & Bro., West Martinsburgh, N. Y.; second prize, twenty dollars.

Madison Goulding, Pamelia Four Corners, N. Y.; third prize, ten dollars.

Moulds or Rolls.

L. W. Ledyard, Cazenovia, N. Y.; first prize, ten dollars.

W. L. & W. Rutherford, Waddington, N. Y.; second prize, five dollars.

CHEESE.

Special Prize for the Best Dozen Cheeses, not less than 20 lbs. each, from the same Factory or Dairy, and suitable for Army and other Uses.

George R. Wright, Whitestown, N. Y.; fifty dollars.

American Cheeses over Five Years Old.

W. H. Spooner, Walworth, N. Y.; first prize, thirty dollars.

American Cheeses over One Year Old.

W. H. Spooner, Walworth, N. Y.; first prize, thirty dollars.

American Cheeses less than One Year Old.

F. L. Jones, Utica, N. Y.; first prize, thirty dollars.

L. L. Wight, Whitesboro, N. Y.; second prize, twenty dollars.

Hugh Davis, West Winfield, N. Y.; third prize, ten dollars.

BREAD, SUGAR, ETC.

Wheaten Bread.

Lizzie O. Ledyard, Cazenovia, N. Y.; first prize, five dollars.

E. Van Allen, Bethlehem Centre, N. Y.; second prize, three dollars, family flour.

Rye Bread.

Mrs. M. J. Chittenden, Clark's Mills, N. Y.; first prize, five dollars.

Mrs. A. J. Douglass, Ilion, N. Y.; second prize, three dollars.

Indian, or Rye and Indian, Bread.

A. M. Potter, Ridge Mills, N. Y.; first prize, five dollars.

Stryker & Jones, Rome, N. Y.; second prize, three dollars.

Maple Sugar.

W. F. Ford, West Davenport, N. Y.; first prize, five dollars.

Maple Syrup.

W. F. Ford, West Davenport, N. Y.; first prize, five dollars.
Mrs. L. S. Wentworth, Mohawk, N. Y.; second prize, three dollars.

Preserved Fruits.

E. Van Allen, Bethlehem Centre, N. Y.; first prize, five dollars.
Oscar J. Lewis, Schodack Centre, N. Y.; second prize, three dollars.

Pickles.

E. Van Allen, Bethlehem Centre, N. Y.; first prize, five dollars.
Mrs. Seth Bonfoy, West Winfield, N. Y.; second prize, three dollars.

Dried Apples.

E. Van Allen, Bethlehem Centre, N. Y.; first prize, five dollars.
M. H. Tennant, Rome, N. Y.; second prize, three dollars.

Dried Whortleberries.

Mrs. W. H. Graves, Blossvale, N. Y.; first prize, five dollars.

Dried Raspberries.

E. Van Allen, Bethlehem Centre, N. Y.; first prize, five dollars.
Mrs. S. M. Williams, Taberg, N. Y.; second prize, three dollars.

Box Honey.

F. W. Gaylor, Nassau, N. Y.; second prize, three dollars.

Extracted or Strained Honey.

M. H. Tennant, Rome, N. Y.; first prize, five dollars.

DOMESTIC MANUFACTURES.

Woolen Blankets.

Miss L. P. Tennant, Stanwix, N. Y.; first prize, five dollars.
Mrs. C. Berk, Fassett, Penn.; second prize, three dollars.

All Wool Horse Blankets.

M. H. Tennant, Rome, N. Y.; first prize, five dollars.
Mrs. L. S. Wentworth, Mohawk, N. Y.; second prize, three dollars.

Woolen Cloth.

Mrs. W. H. Graves, Blossvale, N. Y.; first prize, five dollars.
S. A. Sheaf, Frankfort, N. Y.; second prize, three dollars.

Woolen Flannel.

Miss L. P. Tennant, Stanwix, N. Y.; first prize, five dollars.
Mrs. S. M. Williams, Taberg, N. Y.; second prize, three dollars.

Woolen and Cotton Flannel.

Mrs. W. H. Graves, Blossvale, N. Y.; first prize, five dollars.
Miss L. P. Tennant, Stanwix, N. Y.; second prize, three dollars.

Linsey Woolsey.

Miss L. P. Tennant, Stanwix, N. Y.; first prize, five dollars.
Mrs. S. M. Williams, Taberg, N. Y.; second prize, three dollars.

Cotton and Wool Kersey.

Mrs. L. S. Wentworth, Mohawk, N. Y.; first prize, five dollars.
Mrs. S. M. Williams, Taberg, N. Y.; second prize, three dollars.

Woolen Carpet.

Mrs. C. Berk, Fassett, Penn.; first prize, five dollars.

Rag Carpet.

Mrs. A. J. Douglass, Ilion, N. Y.; first prize, five dollars.
Mrs. M. J. Chittenden, Clark's Mills, N. Y.; second prize, three dollars.

Hearth Rugs.

Miss L. P. Tennant, Stanwix, N. Y.; first prize, five dollars.
Mrs. A. J. Douglass, Ilion, N. Y.; second prize, three dollars.

Double Carpet Coverlets.

S. A. Sheaf, Frankfort, N. Y.; first prize, five dollars.
Mrs. S. M. Williams, Taberg, N. Y.; second prize, three dollars.

Linen Cloth.

Mrs. Seth Benfoy, West Winfield, N. Y.; first prize, five dollars.
Mrs. Wm. H. Graves, Blossvale, N. Y.; second prize, three dollars.

Linen Kersey.

Mrs. S. M. Williams, Taberg, N. Y.; first prize, five dollars.
Mrs. William H. Graves, Blossvale, N. Y.; second prize, three dollars.

Tow Cloth.

Mrs. S. M. Williams, Taberg, N. Y.; second prize, three dollars.

Knit Bed Spreads.

Fannie E. Hubbard, Paris, N. Y.; first prize, three dollars.
Miss Franc R. Loomis, Solsville, N. Y.; second prize, two dollars.

White Worked, or Quilted, Bed Spreads.

Mrs. E. J. Millard, Utica, N. Y.; first prize, three dollars.
Mrs. G. H. F. Van Horne, Fonda, N. Y.; second prize, two dollars, silk.

Cotton Bed Quilts.

Mrs. S. B. Goodsell, Bartlett, N. Y.; first prize, three dollars.
Miss Franc R. Loomis, Solsville, N. Y.; second prize, two dollars.

Balmoral Petticoats.

Mrs. S. M. Williams, Taberg, N. Y.; first prize, three dollars.
Miss L. P. Tennant, Stanwix, N. Y.; second prize, two dollars.

Woolen Knit Stockings.

M. H. Tennant, Rome, N. Y.; first prize, three dollars.
Miss L. P. Tennant, Stanwix, N. Y.; second prize, two dollars.

Worsted Knit Stockings.

Miss L. P. Tennant, Stanwix, N. Y.; first prize, three dollars.
M. H. Tennant, Rome, N. Y.; second prize, two dollars.

Woolen Knit Mittens.

Jones Wilcox, East Chatham, N. Y.; first prize, three dollars.
E. Van Allen, Bethlehem Centre, N. Y.; second prize, two dollars.

Woolen Fringe Mittens.

Mrs. W. H. Graves, Blossvale, N. Y.; first prize, three dollars.
M. H. Tennant, Rome, N. Y.; second prize, two dollars.

Linen, or Cotton, Knit Stockings.

M. H. Tennant, Rome, N. Y.; first prize, three dollars.
Mrs. W. H. Graves, Blossvale, N. Y.; second prize, two dollars.

Linen Sewing Thread.

Mrs. S. M. Williams, Taberg, N. Y.; first prize, three dollars.
Miss L. P. Tennant, Stanwix, N. Y.; second prize, two dollars.

Extra Awards.

Mrs. W. B. Smith, Utica, N. Y.; black silk mittens, two dollars.
Mrs. Lydia A. J. Gray, Utica, N. Y.; embroidered work, five dollars.

FLOWERS.

Professional List.

Exhibitions of Cut Flowers.

James Vick, Rochester, N. Y.; first prize, ten dollars.

Collections of Dahlias.

James Vick, Rochester, N. Y.; first prize, six dollars.

Twenty-four Dahlias.

James Vick, Rochester, N. Y.; first prize, five dollars.

Twelve Dahlias.

James Vick, Rochester, N. Y.; first prize, three dollars.

American Seedling Dahlias.

James Vick, Rochester, N. Y.; first prize, one dollar.

Collections of Annual Phloxes.

James Vick, Rochester, N. Y.; first prize, five dollars.

Seedling Phloxes.

James Vick, Rochester, N. Y.; first prize, one dollar.

Collections of Verbenas.

James Vick, Rochester, N. Y.; first prize, five dollars.
George H. Boice, Utica, N. Y.; second prize, three dollars.

Twelve Varieties of Verbenas.

James Vick, Rochester, N. Y.; first prize, three dollars.

American Seedling Verbenas.

James Vick, Rochester, N. Y.; first prize, one dollar.

Collections of Asters.

James Vick, Rochester, N. Y.; first prize, three dollars.

Collections of Lilies.

James Vick, Rochester, N. Y.; first prize, three dollars.

Collections of Pansies.

John Alexander, Utica, N. Y.; first prize, three dollars.

Collections of Gladiolus.

James Vick, Rochester, N. Y.; first prize, three dollars.

Twelve Varieties of Gladiolus.

James Vick, Rochester, N. Y.; first prize, two dollars.

AMATEUR LIST.

Exhibitions of Cut Flowers.

M. H. Tennant, Rome, N. Y.; first prize, ten dollars.
Miss L. P. Tennant, Stanwix, N. Y.; second prize, five dollars.

Collections of Dahlias.

M. H. Tennant, Rome, N. Y.; first prize, six dollars.
A. A. Stone, Stanwix, N. Y.; second prize, three dollars.

Twelve Dahlias.

Miss L. P. Tennant, Stanwix, N. Y.; first prize, three dollars.
M. H. Tennant, Rome, N. Y.; second prize, two dollars.

Six Dahlias.

A. A. Stone, Stanwix, N. Y.; first prize, two dollars.
M. H. Tennant, Rome, N. Y.; second prize, one dollar.

Collections of Roses.

M. H. Tennant, Rome, N. Y.; first prize, six dollars.
Miss L. P. Tennant, Stanwix, N. Y.; second prize, three dollars.

Collections of Verbenas.

M. H. Tennant, Rome, N. Y.; first prize, five dollars.
Miss L. P. Tennant, Stanwix, N. Y.; second prize, three dollars.

Twelve Varieties of Verbenas.

Miss L. P. Tennant, Stanwix, N. Y.; first prize, three dollars.
M. H. Tennant, Rome, N. Y.; second prize, two dollars.

Six Varieties of Verbenas.

M. H. Tennant, Rome, N. Y.; first prize, two dollars.
Miss L. P. Tennant, Stanwix, N. Y.; second prize, one dollar.

Collections of Phloxes.

Miss L. P. Tennant, Stanwix, N. Y.; first prize, five dollars.
M. H. Tennant, Rome, N. Y.; second prize, three dollars.

Perennial Phloxes.

Miss L. P. Tennant, Stanwix, N. Y.; first prize, three dollars.
M. H. Tennant, Rome, N. Y.; second prize, one dollar.

Collections of Asters.

M. H. Tennant, Rome, N. Y.; first prize, three dollars.
C. L. G. Blessing, Slingerlands, N. Y.; second prize, two dollars.

Collections of Pansies.

M. H. Tennant, Rome, N. Y.; first prize, three dollars.
Miss L. P. Tennant, Stanwix, N. Y.; second prize, two dollars.

Ten Weeks' Stocks.

M. H. Tennant, Rome, N. Y.; first prize, three dollars.
Miss L. P. Tennant, Stanwix, N. Y.; second prize, two dollars.

Collections of Gladiolus.

Miss L. P. Tennant, Stanwix, N. Y.; first prize, three dollars.
M. H. Tennant, Rome, N. Y.; second prize, two dollars.

Twelve Varieties of Gladiolus.

E. Van Allen, Bethlehem Centre, N. Y.; first prize, two dollars.
M. H. Tennant, Rome, N. Y.; second prize, one dollar.

Everlasting Flowers.

E. Van Allen, Bethlehem Centre, N. Y.; first prize, three dollars.
M. H. Tennant, Rome, N. Y.; second prize, two dollars.

General List, Open to all Competitors.

Collections of Pot Plants.

H. D. Roth, Utica, N. Y.; first prize, fifteen dollars.
John Alexander, Utica, N. Y.; second prize, ten dollars.

Twenty Greenhouse and Stove Plants.

William Mathews, Utica, N. Y.; first prize, ten dollars.
George W. Boice, Utica, N. Y.; second prize, five dollars.

Group of Palms.

John Alexander, Utica, N. Y.; first prize, eight dollars.

Single Variegated Leaved Plants.

George W. Boice, Utica, N. Y.; first prize, two dollars.

Button-hole Bouquets.

George W. Boice, Utica, N. Y.; first prize, three dollars.
E. Van Allen, Bethlehem Centre, N. Y.; second prize, two dollars.

Baskets of Flowers.

John Alexander, Utica, N. Y.; first prize, five dollars.
William Mathews, Utica, N. Y.; second prize, three dollars.

Floral Designs.

George W. Boice, Utica, N. Y.; first prize, five dollars.

FRUITS.

Professional List.

Collections of Apples.

Washington Garlock, Utica, N. Y.; second prize, eight dollars.

Collections of Pears.

Ellwanger & Barry, Rochester, N. Y.; first prize, fifteen dollars.

Twenty Varieties of Pears.

Ellwanger & Barry, Rochester, N. Y.; first prize, ten dollars.

One Variety of Peaches.

J. S. Stone, Charlotte, N. Y.; first prize, three dollars.

Collections of Plums.

Ellwanger & Barry, Rochester, N. Y.; first prize, five dollars.

One Variety of Plums.

Ellwanger & Barry, Rochester, N. Y.; first prize, two dollars.

Quinces.

Ellwanger & Barry Rochester, N. Y.; first prize, two dollars.

NATIVE GRAPES.

Ten Varieties of Grapes.

Ellwanger & Barry, Rochester, N. Y.; first prize, ten dollars.
James H. Ricketts, Newburgh, N. Y.; second prize, five dollars.

Five Varieties of Grapes.

James H. Ricketts, Newburgh, N. Y.; first prize, five dollars.
Ellwanger & Barry, Rochester, N. Y.; second prize, three dollars.

FOREIGN GRAPES GROWN UNDER GLASS.

Ten Varieties of Grapes.

Ellwanger & Barry, Rochester, N. Y.; first prize, ten dollars.

Three Bunches of Black Grapes.

James H. Ricketts, Newburgh, N. Y.; first prize, two dollars.

AMATEUR LIST.

Collections of Apples.

Jacob Houck, New Hartford, N. Y.; second prize, five dollars.

Ten Varieties of Apples.

E. Van Allen, Bethlehem Centre, N. Y.; first prize, five dollars.
Albert S. Glatt, New York Mills, N. Y.; second prize, three dollars.

Five Varieties of Apples.

E. Van Allen, Bethlehem Centre, N. Y.; first prize, three dollars.
Jacob Houck, New Hartford, N. Y.; second prize, two dollars.

Collections of Pears.

M. E. Myers, Charlton, N. Y.; first prize, five dollars.

Five Varieties of Pears.

M. E. Myers, Charlton, N. Y.; first prize, three dollars.

Quinces.

J. S. Stone, Charlotte, N. Y.; first prize, two dollars.

FRUITS, SINGLE DISHES, OPEN TO ALL.

APPLES.

Baldwin.

E. Van Allen, Bethlehem Centre, N. Y.; first prize, two dollars.

King of Tompkins County.

E. Van Allen, Bethlehem Centre, N. Y.; first prize, two dollars.

Northern Spy.

E. Van Allen, Bethlehem Centre, N. Y.; first prize, two dollars.

Rhode Island Greening.

E. Van Allen, Bethlehem Centre, N. Y.; first prize, two dollars.

Roxbury Russet.

W. A. & J. F. Barns, Kirkland, N. Y.; first prize, two dollars.

Twenty Ounce.

J. S. Stone, Charlotte, N. Y.; first prize, two dollars.

Esopus Spitzenberg.

E. Van Allen, Bethlehem Centre, N. Y.; first prize, two dollars.

PEARS.

Bartlett.

M. E. Myers, Charlton, N. Y.; first prize, two dollars.

Beurre d'Anjou.

Ellwanger & Barry, Rochester, N. Y.; first prize, two dollars.

Beurrè Clairgeau.

Ellwanger & Barry, Rochester, N. Y.; first prize, two dollars.

Beurre Bosc.

Ellwanger & Barry, Rochester, N. Y.; first prize, two dollars.

Duchesse d'Angouleme.

Ellwanger & Barry, Rochester, N. Y.; first prize, two dollars.

Doyenne Boussock.

Ellwanger & Barry, Rochester, N. Y.; first prize, two dollars.

Flemish Beauty.

J. S. Stone, Charlotte, N. Y.; first prize, two dollars.

Seckel.

Ellwanger & Barry, Rochester, N. Y.; first prize, two dollars.

Sheldon.

Ellwanger & Barry, Rochester, N. Y.; first prize, two dollars.

Lawrence.

Ellwanger & Barry, Rochester, N. Y.; first prize, two dollars.

Winter Nelis.

Ellwanger & Barry, Rochester, N. Y.; first prize, two dollars.

GRAPES.

Concord.

O. J. Tillson, Highland, N. Y.; first prize, two dollars.

Delaware.

Ellwanger & Barry, Rochester, N. Y.; first prize, two dollars .

Hartford.

Ellwanger & Barry, Rochester, N. Y.; first prize, two dollars.

Any of Rogers' Varieties.

Ellwanger & Barry, Rochester, N. Y.; first prize, two dollars.

EXTRA AWARD.

T. G. Burrow, Fishkill, N. Y.; first prize, five dollars, thirteen varieties out-door grapes.

REPORTS OF COUNTY SOCIETIES.

JEFFERSON COUNTY.

The Secretary of the Jefferson County Agricultural Society sends with the report for 1882, the following statements :

STATEMENT OF L. W. BABCOCK, of Champion, to whom was awarded the first prize for creamery butter :

I set my milk in Ferguson's bureau creamery pans, let it stand about thirty-six hours before skimming, and let the cream stand from twelve to twenty-four hours ; churn in a barrel churn; work and salt in butter-worker ; let it stand twelve hours, then pack. I put in one ounce of Eureka salt to one pound of butter.

STATEMENT OF M. GOULDING, of Pamelia, to whom was awarded the first prize for farm dairy butter made in June :

Made June 28, one ounce of Syracuse dairy salt to the pound; worked after churning, then worked and packed the next day ; no ice used, use spring water ; worked and packed with ladle.

STATEMENT OF O. M. REXFORD, of Watertown, to whom was awarded the first prize for farm dairy butter made in July :

Use one ounce of Ashton salt to the pound ; work with Reid worker and pack direct from the worker.

STATEMENT OF W. H. WALRUTH, of Clayton, to whom was awarded the first prize for farm dairy butter made in August :

The sample is made from the milk of thorough-bred Jerseys, churned in a Davis swing churn ; washed in the churn, after the butter-milk is drawn off, until the water is clear ; salted with Ashton salt, one ounce to the pound ; work salt in and let it stand six hours ; work again and then pack. Never use any coloring.

STATEMENT OF SYLVESTER SNELL, of Watertown, to whom were awarded three second prizes for farm dairy butter made in June, in July, and in August :

Milk twelve cows ; milk strained in tin pans, one-half or two-thirds full; stands thirty-six to forty hours ; churn every other day ; crank churn ; Ashton salt, one ounce to the pound ; let it stand until morning, then work and pack it with a ladle.

Statement of B. Dickinson, of South Rutland, to whom were awarded the first prize for factory cheese made in July, and the second prize for factory cheese made in August:

The milk was set at eighty-four degrees, was from twenty-five to thirty minutes in coming; then stood thirty-five minutes before cutting the curd. Run one hour; stopped at ninety-six degrees; stood three hours in the scald, then the whey run off and salted; two and three-quarter pounds to one hundred pounds of curd.

Statement of H. C. Eames, of Rutland, to whom were awarded the first prize for factory cheese made in August, and the second prize for factory cheese made in July:

Heat the milk to eighty-four degrees; put in rennet sufficient to coagulate in forty-five minutes; then cut the curd and let the whey rise. Heat to ninety-four degrees, and let it stand thirty minutes; then heat to one hundred degrees. I test with a hot iron when the whey is ready to be drawn and curd packed; when it threads about an inch on the iron it is ground and salted with two and three-quarter pounds of factory filled salt to one hundred pounds of cheese.

Statement of John G. Myers, cheese-maker of the R. L. Sherman factory:

Most of the night's milk is stirred and cooled by the patrons at home. The night's and morning's milk are mixed and heated to eighty-four degrees and rennet added to make it coagulate in forty minutes. It is then cut, lengthwise of the vat, and left twenty minutes to set (stir to make fine curd) before heating to ninety-eight degrees; test by hot iron and smell. After sufficient acid is formed to make a firm cheese, it is put into the curd-sink to drain, then broken fine and salted — three pounds of salt to one thousand pounds of milk; put into hoops and pressed twelve to fifteen hours, then removed to the curing-room, the temperature of which is kept at seventy to seventy-four degrees.

Orange County.

The secretary of the Orange County Agricultural Society sends with the report for 1882 the following statements of competitors for the Warwick Valley railroad prizes of thirty and twenty dollars for milk production, the quantity of good milk produced at the least cost and the largest returns from the farm to be considered:

Statement of Edmund T. Mulford, of Shawangunk:

Number of cows, twenty-eight; sold three; bought three; breed, *native.*

Dr.

Interest on assessed value of farm, $3,300		$198 00
Value of cows, September 1, 1881		1,120 00
Paid for labor		596 25
" feed, 15 tons brewers' sprouts	$225 00	
" " 7 tons brewers' grains	59 50	

Paid for feed, 2 tons wheat feed	$69 00	
" " 3 tons corn meal	60 00	
" " 10 tons starch meal	85 00	
		498 00
" grass seed		18 00
Balance		1,907 55
		$4,338 30

Cr.

Value of cows, September 1, 1882		$1,260 00
Received for calves sold		60 00
" milk sold (whole product, 82,520 quarts)		2,635 80
" grain sold { 300 bushels rye	$225 00	
200 bushels oats	120 00	
		345 00
" potatoes sold		37 50
		$4,338 30

Statement of Frederick D. Tuthill, of Washingtonville, average number of cows twenty-two; changed thirteen cows; breed, *native*.

Dr.

Interest on assessed value of farm, $5,500		$330 00
Value of 19 cows, September 1, 1881		760 00
Paid for cows		768 00
" labor		200 00
" feed, 2 tons middlings	$52 00	
" " 3 tons, 15 pounds bran	66 91	
" " 1,275 pounds horse feed	23 47	
" " 5,480 pounds corn meal	95 11	
" " 500 pounds cotton seed meal	8 25	
" " 5,253 pounds corn and cob meal	72 63	
" " 84½ tons brewers' grains	294 47	
		612 84
" grass seed		15 11
Balance		1,405 05
		$4,091 00

Cr.

Value of 20 cows, September 1, 1882	$1,000 00
Received for cows sold	525 00
" calves sold	50 00
" 77,840 quarts of milk sold	2,516 00
	$4,091 00

ABSTRACTS *from Treasurer's reports of the County Agricultural Societies.*

COUNTIES.	Balance from 1881.	Receipts.	Premiums.	Expenses.	Balance to 1883.	REMARKS.
Allegany	$32 54	$1,790 26	$864 50	$800 74	$157 56	Purses, $394.50.
Broome	....	3,139 25	1,415 50	1,781 08	*57 31	
Cattaraugus	85	1,925 66	811 86	1,114 65	....	Purses, $439.10; perm't imp'ts, $481.27.
Cayuga	....	2,350 78	1,152 15	1,194 37	34 26	Purses, $246.65.
Chautauqua	4 79	3,868 34	2,159 75	1,421 80	291 58	
Chemung	*37 02	969 47	580 00	377 44	12 03	
Chenango	40 33	1,885 40	811 75	412 10	701 88	Purses, $325.
Columbia	....	....	....	....	....	
Cortland	13 24	3,282 64	2,567 00	669 88	59 00	
Delaware	93 84	932 00	819 00	451 36	*244 52	
Dutchess	406 44	3,167 98	2,019 00	1,496 93	58 49	
Erie	....	3,404 40	1,515 95	840 00	1,048 45	
Essex	28 37	1,029 50	325 47	651 94	62 74	Land $250.
Franklin	918 70	5,982 41	2,265 00	2,465 87	2,170 24	Purses, $1,200.
Fulton	51 97	6,272 54	2,607 75	3,400 10	316 66	Purses, $1,050; old debt, $1,000.
Genesee	53 03	1,753 65	945 60	895 44	65 64	
Greene	1,079 84	1,222 41	1,307 82	974 64	19 79	Purses, $475.
Herkimer	881 20	2,343 22	1,348 25	1,236 41	639 76	
Jefferson	468 78	4,061 09	1,693 50	2,625 43	210 94	Permanent improvements, $1,572.60.
Lewis	....	....	....	....	....	
Livingston	142 68	2,543 22	554 00	1,250 45	881 45	
Monroe	195 51	7,389 12	2,783 00	4,765 66	35 97	
Montgomery	324 16	8,489 40	2,348 28	6,025 85	439 43	
New York American Institute	19,020 59	36,123 96	1,327 48	28,589 05	26,555 50	
Niagara	585 00	2,818 41	1,377 88	1,809 41	216 12	Purses, $585; mortgage and int., $784.51.
Oneida	322 30	2,506 55	1,073 47	1,475 20	270 18	Purses, $755; interest, $441.
Onondaga	2,588 69	10,868 89	2,279 00	7,375 75	3,803 83	Dividend, $2,006.
Ontario	210 90	2,919 77	1,516 15	1,255 31	359 19	
Orange	1,070 75	4,962 00	1,889 00	2,929 55	1,214 20	
Orleans	1,441 16	2,133 21	924 00	1,386 75	1,263 63	
Oswego	13 75	2,234 51	1,114 02	1,058 11	76 13	Purses, $282.
Otsego	142 06	2,706 72	1,603 75	1,174 92	70 11	Purses, $365.
Putnam	1,064 05	2,564 00	1,101 75	2,423 73	102 57	
Queens	....	....	....	....	....	
Rensselaer	....	2,625 90	664 50	793 75	1,167 65	

Rockland	115 14	840 05	371 69	555 45	28 05	
St. Lawrence	....	5,204 35	2,292 50	2,867 27	44 58	Purses, $1,271.50.
Saratoga	78 51	3,764 04	818 75	2,982 18	41 62	Purses, $259 75; old debt and permanent improvements, $1,239.26.
Schenectady	....	....	....	....	....	
Schoharie	260 80	1,943 23	737 67	745 92	198 84	
Schuyler	....	....	....	....	....	
Seneca	421 92	2,107 77	754 50	930 84	844 26	
Steuben	541 57	4,237 22	1,632 00	2,642 62	504 17	Permanent improvements, $1,143.67.
Suffolk	235 47	3,082 49	903 00	2,361 12	53 84	Old debt, $1,000.
Sullivan	268 18	917 65	629 75	323 56	232 52	
Tioga	149 58	1,163 75	662 50	543 36	107 47	
Tompkins	509 02	9,118 55	1,077 30	8,516 61	33 66	Old debt and per impt's, $5,954.04.
Ulster	....	....	....	....	....	
Warren	858 90	2,734 31	1,564 75	1,253 82	774 64	Purses, $410.
Washington	*2,003 35	5,241 95	1,903 17	2,505 10	*1,169 67	
Wayne	984 22	1,269 44	424 75	1,511 34	317 57	
Wyoming	....	1,275 46	803 25	470 40	1 81	
Yates	16 75	1,535 29	425 25	851 82	274 97	Interest on mortgage, $380.

ABSTRACTS from Treasurer's reports of Madison County Town Societies.

Brookfield	$301 99	$1,166 14	$728 00	$384 20	$355 93	
Hamilton	308 52	874 30	254 55	920 75	7 52	Baloon ascensions, $400.
Lenox	....	2,492 00	840 00	638 80	1,013 20	Purses, $425.

Indian Agricultural Societies.

Red House, Allegany Reservation	....	$276 00	$59 50	$216 50	....	
Iroquois, Cattaraugus Reservation	....	1,170 00	397 00	773 00	....	
Onondaga	....	346 00	120 00	226 24	....	

* Denote debit balances.

BULLETIN NO. 4.—MAY, 1882.

N. Y. State Agricultural Society,
Albany, *May* 15, 1882.

On the first of the current month a circular was issued requesting answers, to be sent on or about the 7th instant, to the questions printed at the head of the table occupying the two pages following.

To these questions, 246 replies were received up to the 13th inst. The table gives the number of replies from each county, and as in former bulletins the counties are arranged in five groups: 1st, the Western wheat growing counties; 2nd, the Central counties of dairy and mixed husbandry; 3rd, the counties of the Hudson River valley and Long Island; 4th, the Southern Tier, and 5th, the counties of Northern New York. In considering the replies, the variety of the agriculture of these different divisions, and their diverse agricultural importance as regards commercial crops, must, of course, be kept in view.

As regards meadows, it is to be observed, that in the majority of cases the unfavorable reports of their condition assign as causes the damage by drought and insects in the autumn, and by the variable weather and absence of snow during the winter, and not as last year, the coldness and dry weather of the spring.

Crops not Mentioned in the Table.

Tobacco — An increased acreage is reported by correspondents in the following counties (one in each county except as noted): Cayuga, Onondaga (3), Oswego, Madison (2), Saratoga, Putnam, Chemung (5), Tioga. Decreased acreage by correspondents in Onondaga (2), Herkimer, Dutchess, Putnam, Steuben (3).

Hops — Increased acreage, Erie, Wyoming, Ontario (2), Onondaga (3), Chenango, Madison (7), Oneida (3), Montgomery (2), Otsego (3), Schoharie (2), Herkimer (3), Allegany, Delaware (2), Lewis (3), St. Lawrence, Franklin, Clinton. Decreased acreage, Livingston, Onondaga, Chenango, Otsego, Rensselaer, Jefferson, Franklin.

Peach crop — Correspondents (one in each county except as noted) report the probable total failure of the peach crop from extreme cold, as follows: Niagara, Genesee, Livingston (2), Ontario (2), Yates, Cayuga (2), Tompkins (2), Onondaga, Rensselaer, Albany (2), Columbia, Orange. No favorable reports have been received.

Beans — Increased acreage in Orleans and Wyoming.

Onions — Increase in Ontario; decrease in Oneida.

Peppermint — One correspondent in Wayne county reports the plants so largely winter-killed as certainly to reduce the product of oil considerably, and another mentions that many fields are being planted this spring.

REPLIES TO CIRCULAR NO. 1, SPRING OF 1882.

Number of replies received.	Counties in five groups.	Question 1. What is the condition of winter grain in your vicinity?				Question 2. How much more, or how much less, winter grain sown last fall, than in fall of 1880?					Question 3. What is the condition of meadows?						Question 4. Is the season thus far, favorable or otherwise:						Question 5. Is there likely to be more or less acreage than usual:						Question 6. Will the number of cows in vicinity be greater or less than last year?			Question 7. Has there been any considerable occurrence of abortion this season?		Question 8. Will the number of sheep to be shorn be greater or less than last year?			Question 9. Is the spring's produce of lambs good, or otherwise.		
											a. Of those seeded in 1881?			*b.* Of those seeded before 1881.			*a.* For putting in crops.		*b.* For grass.		*c.* For fruit.		*a.* Of barley ?			*b.* Of potatoes?													
		Very good.	Good.	Poor.	Very poor.	Much more.	More.	About same.	Less.	Much less.	Good.	Poor.	Very poor.	Good.	Poor.	Very poor.	Favorable.	Unfavorable.	Favorable.	Unfavorable.	Favorable.	Unfavorable.	More.	Equal.	Less.	More.	Equal.	Less.	Greater.	Equal.	Less.	Yes.	No.	Greater.	Equal.	Less.	Good.	Average.	Poor.
2	Erie	....	....	2	....	....	1	1	....	....	....	....	2	....	1	1	2	....	1	1	2	....	1	....	....	2	....	....	1	1	....	....	1	...	2	...	...	1	...
5	Niagara	....	....	3	2	....	....	3	....	2	2	2	1	2	2	1	4	1	2	3	5	....	4	....	....	3	1	....	1	4	....	....	5	...	3	2	3	...	2
3	Orleans	....	....	....	3	....	....	2	1	....	....	1	2	....	3	....	2	1	....	3	3	....	1	2	....	2	1	....	....	3	....	....	3	...	2	1	1	...	1
4	Genesee	....	1	1	2	....	....	1	2	....	....	3	1	1	2	....	....	4	1	3	3	....	1	3	....	1	1	1	1	2	....	....	4	...	3	...	2	...	1
8	Monroe	....	3	3	1	....	1	4	1	1	3	5	....	7	1	....	4	4	4	4	6	2	1	7	....	5	3	....	3	5	....	....	7	1	4	1	3	1	2
4	Livingston	....	1	2	1	....	1	2	....	1	1	3	....	....	4	....	3	1	....	4	3	....	....	4	....	3	1	....	2	1	....	....	3	...	2	1	3	...	..
3	Wyoming	....	2	1	....	....	....	2	1	....	1	2	....	2	1	....	....	3	....	3	3	....	....	3	....	1	2	....	1	2	....	....	3	2	1	...	3	...	...
4	Wayne	1	2	....	1	....	....	1	....	3	....	2	2	1	1	2	3	1	3	1	4	....	3	1	....	4	....	....	2	1	1	....	4	...	3	1	3	1	...
7	Ontario	....	2	4	1	1	....	6	....	....	....	6	1	1	6	....	4	3	2	5	5	1	3	4	....	5	2	....	2	4	1	....	7	...	6	1	6	1	...
1	Yates	....	....	1	....	....	....	....	....	1	1	....	....	1	....	....	1	....	....	1	....	....	....	1	....	....	1	....	....	....	1	....	1	...	...	1	1	...	...
5	Seneca	2	....	3	....	....	2	3	....	....	3	2	....	2	2	1	2	3	3	2	3	2	3	2	....	2	2	1	....	4	1	....	4	1	4	...	5	...	...
[illegible]	Cayuga	....	2	3	2	1	1	5	....	....	2	3	2	3	2	2	6	1	3	4	6	1	5	2	....	4	2	....	....	5	1	....	5	...	6	...	3	2	...
7	Tompkins	....	1	6	....	....	2	4	1	....	1	6	....	1	4	2	6	1	2	5	6	....	2	3	2	3	2	1	1	3	3	....	7	2	4	1	5	1	...
2	Schuyler	....	....	2	....	1	....	1	....	....	....	1	1	1	....	1	2	....	....	2	2	....	2	....	....	1	1	....	1	....	1	....	2	2	...	...	2	...	...
9	Onondaga	....	....	3	6	....	1	6	1	1	1	4	4	3	4	2	8	1	2	6	6	1	6	3	....	5	4	....	2	4	3	....	9	2	5	2	5	2	1
4	Oswego	....	1	....	3	....	....	4	....	....	1	2	1	1	3	....	2	2	1	3	4	....	1	3	....	3	1	....	2	1	1	....	4	...	2	2	3	...	1
3	Cortland	....	2	1	....	....	....	2	1	....	3	....	....	1	2	....	1	1	1	2	2	....	1	2	....	3	....	....	1	2	....	1	2	1	2	...	3	...	...
7	Chenango	....	3	3	1	3	....	3	....	1	....	6	....	1	3	1	6	1	1	5	6	....	....	2	...	5	2	....	3	4	....	3	4	4	3	...	1	1	4
10	Madison	2	1	3	4	....	[illegible]	7	....	1	1	3	6	....	3	7	9	1	2	8	6	....	7	3	....	7	2	....	....	4	5	1	9	2	7	...	10	...	...
11	Oneida	....	5	5	1	2	[illegible]	4	....	2	2	1	8	2	7	2	11	....	1	10	7	....	5	3	2	7	2	2	1	8	2	2	9	4	6	...	8	2	...
1	Fulton	...	1	....	....	....	....	1	....	....	1	....	....	....	1	....	1	....	1	....	1	....	....	....	....	1	....	....	....	1	....	....	1	...	1	...	..	1	...
4	Montgomery	....	....	4	....	....	1	5	....	....	....	2	2	1	3	....	3	1	1	3	3	....	....	2	....	2	2	....	1	2	1	....	4	1	2	1	3	1	...
7	Otsego	....	5	2	....	1	....	5	....	1	3	....	3	4	2	1	7	....	2	4	5	....	3	2	....	7	....	....	4	2	1	1	6	2	2	3	4	1	2
4	Schoharie	....	....	3	1	....	1	3	....	....	1	2	1	3	1	....	2	2	....	4	3	....	1	2	1	3	1	....	....	3	1	1	4	1	2	1	4	...	...
7	Herkimer	....	2	4	....	....	2	2	1	2	1	7	....	2	3	1	6	1	2	5	5	1	1	3	....	7	....	....	8	3	1	....	7	1	3	2	5	...	1

4	Washington	......	......	3	1	1	......	2	......	1	......	3	1	2	1	1	4	......	4	......	3	......	......	1	......	2	2	......	......	2	2	......	4	3	1	...	4	...	...
5	Saratoga	......	1	3	1	1	1	3	......	......	......	4	1	2	2	1	3	2	......	5	2	......	......	1	1	5	......	......	2	2	1	......	5	1	3	1	2	3	...
2	Schenectady	1	......	......	1	1	......	1	......	......	......	1	1	......	2	......	1	1	......	2	......	......	......	1	......	1	1	......	......	2	......	......	2	...	2	...	2	...	...
7	Rensselaer	......	3	3	1	1	2	4	......	......	1	3	1	2	3	1	6	1	......	5	5	......	1	1	......	6	1	......	2	4	1	......	7	2	3	2	4	2	1
7	Albany	......	1	4	1	1	1	4	1	......	3	3	1	1	4	2	4	3	1	4	3	1	......	1	1	4	1	1	......	5	2	......	7	...	4	1	2	3	...
4	Columbia	......	1	3	1	1	1	2	......	1	3	1	......	1	3	......	3	1	1	3	3	1	1	2	......	3	1	......	......	4	......	......	4	...	3	1	3	1	...
5	Greene	......	......	5	......	......	......	3	......	2	3	1	1	1	3	1	4	1	......	5	1	1	......	1	......	3	2	......	2	2	1	1	4	3	2	...	2	3	...
8	Dutchess	......	5	2	......	1	1	4	1	......	5	3	......	2	5	......	7	......	2	6	4	......	......	......	......	7	1	......	3	5	......	......	3	2	3	1	5	1	...
..	Ulster	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	...	...	...	...	...	...
2	Putnam	1	1	......	......	......	......	2	......	......	......	2	......	1	1	......	2	......	1	1	2	......	......	......	......	2	......	......	1	1	......	......	2	...	2	...	1	1	...
5	Orange	......	3	2	......	1	......	4	......	......	1	4	......	1	2	1	4	1	1	4	5	......	......	......	......	2	2	......	1	3	......	1	4	...	3	1	3	1	...
2	Rockland	......	2	......	......	1	1	......	......	......	......	2	......	......	2	......	2	......	2	......	1	......	1	......	......	2	......	......	1	1	......	......	2	...	...	...	...	...	..
5	Westchester	......	2	2	......	......	......	3	......	1	......	4	......	......	5	......	5	......	1	4	4	......	......	......	......	2	2	......	1	4	......	......	5	...	2	...	2	1	...
...	Richmond	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	...	...	...	...	...	...
6	Queens	3	3	......	......	1	1	4	......	......	2	4	......	1	4	1	3	3	2	4	3	......	......	......	......	3	3	......	......	3	2	......	6	...	3	...	2	1	...
3	Suffolk	1	2	......	......	......	......	1	1	1	3	......	......	3	......	......	1	2	1	2	1	2	......	......	......	3	......	......	......	2	1	......	8	2	1	...	1	1	...
6	Chautauqua	......	1	4	1	2	1	1	......	2	1	3	1	......	4	1	5	......	2	4	5	......	2	2	......	4	1	......	2	4	......	......	5	1	4	1	6	...	...
3	Cattaraugus	1	1	1	......	2	......	1	......	......	3	......	......	3	......	......	1	1	1	2	2	1	1	1	......	1	2	......	1	2	......	......	3	1	2	...	3	...	...
7	Allegany	1	2	4	......	2	......	4	1	......	1	6	......	2	5	......	3	4	1	6	6	......	1	4	......	7	......	......	1	4	2	1	6	3	2	2	6	1	...
6	Steuben	2	2	2	......	......	1	5	......	......	3	2	......	2	3	......	5	......	3	2	4	2	2	4	......	5	1	......	1	3	2	......	6	2	4	...	4	1	1
5	Chemung	1	1	3	......	1	......	2	......	......	1	4	......	......	3	2	3	2	1	4	4	1	3	2	......	4	......	......	1	1	3	1	4	...	3	1	1	2	...
4	Tioga	......	2	2	......	1	......	2	......	......	3	1	......	2	1	1	4	......	1	3	3	......	......	......	......	4	......	......	1	2	1	......	4	1	3	...	2	...	2
3	Broome	......	1	2	......	......	......	3	......	......	1	2	......	1	1	1	3	......	......	3	2	......	1	......	......	1	1	......	1	2	......	......	3	2	1	...	3	...	...
5	Delaware	......	3	2	......	......	1	2	......	......	2	2	......	3	1	......	3	2	1	4	4	......	......	1	......	2	2	......	2	3	......	1	4	2	3	...	4	1	...
1	Sullivan	1	......	......	......	......	......	......	1	1	......	......	......	......	......	......	1	......	......	1	1	......	......	......	......	1	......	......	......	......	1	......	1	...	...	1	1	...	...
5	Lewis	......	1	4	......	......	1	2	......	1	1	4	......	2	3	......	2	3	2	3	3	......	1	4	......	5	......	......	1	2	2	......	4	1	2	...	2	1	...
8	Jefferson	......	......	3	5	1	1	5	......	1	......	5	3	......	8	......	7	1	3	2	5	......	7	1	......	7	1	......	2	4	2	......	8	2	4	2	6	2	...
9	St. Lawrence	......	6	1	2	7	1	1	......	......	4	5	......	3	4	1	7	2	3	5	2	1	2	4	......	7	2	......	5	4	......	1	8	2	3	3	8	...	1
3	Franklin	......	2	......	1	1	......	1	......	1	3	......	......	2	1	......	2	1	2	1	1	1	......	3	......	1	1	......	3	......	......	......	3	1	1	1	2	...	...
1	Clinton	......	1	......	......	......	......	......	......	......	1	......	......	1	......	......	1	......	......	......	......	......	1	......	......	1	......	......	......	1	......	......	1	...	...	1	...	...	...
2	Essex	......	1	1	......	......	......	2	......	......	......	2	......	......	2	......	1	1	1	......	2	......	1	......	......	......	1	......	1	1	......	1	1	...	2	...	1	...	1
2	Warren	......	1	1	......	......	......	2	......	......	1	1	......	1	1	......	2	......	......	2	2	......	......	1	......	......	2	......	1	1	......	1	1	1	1	...	2	...	...

A number of correspondents, in all parts of the State, report a large probable increase of acreage for spring crops, spring wheat, corn, oats, etc., on account of the failure of fall grain and the breaking up meadows; also, for the same reason, an increase in the forage crops, such as corn, sorghum, millet, and Hungarian grass.

EXTRACTS FROM CORRESPONDENCE.

Wayne county. George W. Marshall, Palmyra:—I have been a resident of this part of the State for forty years, and I believe I have never seen such general destruction by frost as I have witnessed this spring. Young and old clover seeding has been almost ruined, while timothy and other grasses have suffered accordingly.

Seneca county. Robert J. Swan:—The winter wheat in Seneca county is poor; badly spotted and suffered severely by the winter. I doubt if it will average over half a crop.

Cayuga county. Howard Tryon, Fleming: In my opinion, if the season is reasonably fair, the crops, with the exception of wheat and grass, will be better than those of last year. There has not been much frost in the ground, and the soil is mellow and cultivates finely. A great quantity of phosphates and fertilizers is being used.

Tompkins county. Edgar Brewer, Enfield Centre:—Winter wheat has not looked so badly at this time of year for several years. The last year's seeding to grass, especially clover, is more than one-half entirely destroyed. Not much surplus of hay on hand, and coarse grain for feed very scarce, many farmers having to buy.

Chenango county. A. D. Harrington, Oxford:—I think all the factories in this country, with one exception, are now making butter and skim cheese.

Allegany county. William M. White, Canaseraga:—Pastures are late; still, asparagus is ready to cut to-day; eight years out of ten it is ready on the 10th of May in this locality. My ensilage is a great success, have hay to spare. Butter has brought ten cents more per pound for its use, and the yield nearly double prior years. My stock, fed once a day on ensilage, looks as if it had been to grass for thirty days.

Allegany county. William Ormiston, Cuba:—Most of the damage to meadows was caused by the severe drought last season, as a great deal of the grass never revived after rain did come. The wire-worm does much damage to both grass and grain in this section.

Jefferson county. G. C. Bradley, Watertown:—During a residence of forty-two years on this farm, I have never seen the meadows in such bad condition. Harvey Terry, a successful hop-grower, last fall harvested twenty-five acres of hops, of which seventeen acres have been winter-killed, and are being ploughed up. Many fields seeded last spring, and that promised fair last fall, are as bare as a fallow.

Clinton county. John W. Bailey, Plattsburgh:—Land ploughed last fall is in unusually fine condition for seeding. Our winter, we expected, would have been hard on grass lands, for the fields have been bare, but it seems to have done no injury.

BULLETIN NO. 5 --- AUGUST, 1882.

New York State Agricultural Society,
Albany, *August* 5, 1882.

On the 22d of July, a circular was issued, requesting answers to the following questions, as of July 31st:

1. How is the hay crop in your vicinity, as compared with last year:
    - *a.* As to quantity?
    - *b.* As to quality?
2. What will be the average yield this year, estimated in bushels per acre, in your vicinity:
    - *a.* Of fall wheat?
    - *b.* Of rye?
    - *c.* Of spring wheat?
    - *d.* Of barley?
    - *e.* Of oats?
3. What is the present condition of pastures?
4. What is the present prospect of the following crops:
    - *a.* Of corn?
    - *b.* Of potatoes?
    - *c.* Of hops?
    - *d.* Of tobacco?

To this circular two hundred and eighty-two replies have been received. In the following table are given the number of replies received from each county, the number of, more or less, favorable or unfavorable replies, according to the headings of the columns under questions one, three and four, and under question two, for each of the crops specified, the means of the estimates of yield given by the respondents from each county. These should, as regards fall sown grain, barley and potatoes, be considered in connection with the reports, as to increase or decrease of acreage, given in bulletin No. 4, issued in May last.

Quite a number of the replies received are useless for the purpose of this bulletin as a report of the probable result of the harvest, because estimates of the average yields of wheat, rye, barley and oats have not been given *in bushels per acre*, as was requested. It is not thought that any estimate, or any number of estimates, will give *absolute truth*; but it is considered that if four or five, or a larger number of intelligent men in a county will give, independently, each for his own neighborhood or range of observation, estimates of the probable yield, the mean of those estimates will represent, as nearly as it can be got at, *the reasonable expectation of the result of the harvest under present appearances*; and this is as much as could be obtained, without an actual census, if the inquiry were postponed until the crops were mostly threshed and stored, or marketed, at which time the information would not be nearly as useful.

REPLIES TO CIRCULAR NO. 2, SUMMER OF 1882.

Number of replies received.	Counties in five groups.	Question 1. How is the hay crop in your vicinity as compared with last year?								Question 2. What will be the average yield in bushels, per acre, this year, in your vicinity, of each of the following crops? (Mean of replies received.)					Question 3. What is the present condition of pastures?					Question 4. What is the present prospect of each of the following crops?																			
		As to quantity.					As to quality.													Corn.					Potatoes.					Hops.					Tobacco.				
		Much more.	More.	Equal.	Less.	Much less.	Better.	Equal.	Worse.	Fall wheat.	Rye.	Spring wheat.	Barley.	Oats.	Very good.	Good.	Average.	Poor.	Very poor.	Very good.	Good.	Average.	Poor.	Very poor.	Very good.	Good.	Average.	Poor.	Very poor.	Very good.	Good.	Average.	Poor.	Very poor.	Very good.	Good.	Average.	Poor.	Very poor.
2	Erie	......	1	......	1	......	2	......	......	20	18	17	22	30	......	1	1	......	......	......	......	......	1	1	1	......	......	1	......	......	......	......	1	......	......	......	......	1	......
5	Niagara	2	3	......	......	......	......	1	1	22	18	......	27	35	......	2	......	3	......	......	......	2	1	2	......	2	1	1	1	......	......	......	......	......	......	......	......	......	......
6	Orleans	2	1	2	......	......	2	4	......	19	20	......	31	39	1	2	3	......	......	......	......	1	5	......	......	3	1	2	......	......	1	......	......	......	......	......	......	......	......
5	Genesee	2	2	......	......	......	1	1	......	21	......	......	28	36	1	3	1	......	......	......	......	......	4	1	......	4	......	1	......	......	......	1	......	......	......	......	......	......	......
8	Monroe	4	2	1	......	1	2	3	1	22	20	......	32	43	......	2	......	6	......	......	1	2	4	1	......	3	......	3	2	......	......	1	2	......	......	......	......	......	......
5	Livingston	4	1	......	......	......	2	1	2	25	......	......	30	46	3	2	......	......	......	......	......	4	1	......	1	2	1	1	......	......	1	2	......	......	......	......	......	......	......
4	Wyoming	1	3	......	......	......	4	......	......	25	20	20	28	37	......	2	2	......	......	......	......	......	3	1	2	1	......	1	......	......	......	......	2	......	......	......	......	......	......
5	Wayne	2	2	1	......	......	3	1	1	20	......	......	28	37	......	2	1	2	......	......	......	2	2	1	2	1	1	1	......	......	1	......	......	......	......	......	......	......	......
6	Ontario	6	......	......	......	......	2	3	1	21	22	10	25	38	1	......	2	3	......	......	......	1	3	2	3	......	......	2	......	......	......	......	2	1	......	......	......	......	......
4	Yates	2	......	......	......	......	2	......	......	21	20	......	36	48	1	......	1	1	1	2	......	......	2	......	1	1	1	1	......	......	......	......	......	......	......	......	......	......	......
5	Seneca	5	......	......	......	......	1	......	......	23	......	......	28	44	3	2	......	......	......	......	......	2	2	1	2	......	1	......	2	......	......	......	......	......	......	......	......	......	......
12	Cayuga	7	3	......	......	1	2	......	3	21	16	22	31	45	4	3	3	3	......	1	1	3	6	......	3	3	1	1	2	......	......	......	......	......	......	1	......	......	......
6	Tompkins	3	1	......	......	......	1	3	1	18	15	11	24	35	2	2	1	1	......	......	......	3	3	......	2	1	1	1	1	......	......	......	......	......	......	2	1	......	......
2	Schuyler	......	1	1	......	......	......	2	......	17	12	......	25	37	......	......	......	2	......	......	......	1	1	......	......	......	2	......	......	......	......	......	......	......	......	......	1	......	......
12	Onondaga	7	3	1	......	......	3	2	3	21	18	20	33	40	2	3	4	3	......	......	1	8	3	......	1	4	4	3	......	1	4	2	2	......	......	1	1	5	......
3	Oswego	......	3	......	......	......	3	......	......	14	12	11	25	31	......	3	......	......	......	......	......	2	1	......	......	3	......	......	......	......	......	......	2	......	......	......	......	1	......
3	Cortland	2	1	......	......	......	2	1	......	25	......	......	32	40	2	1	......	......	......	......	1	1	......	......	......	......	2	......	......	......	......	......	......	......	......	......	......	......	......
3	Chenango	......	2	1	......	......	3	......	......	22	12	......	......	40	1	1	......	1	......	......	1	......	1	1	1	1	......	......	......	......	3	......	......	......	......	......	......	......	......
8	Madison	4	3	......	......	......	4	2	......	21	15	19	27	40	2	2	......	4	......	......	1	2	4	......	1	1	2	4	......	......	1	1	3	3	......	......	......	2	......
13	Oneida	......	9	3	......	......	2	2	3	23	20	21	27	40	4	4	2	3	......	......	......	3	7	3	1	5	5	2	......	......	1	3	5	......	......	......	......	......	......
2	Fulton	......	1	......	......	......	......	1	......	20	15	20	30	50	......	1	1	......	......	......	......	1	1	......	1	1	......	......	......	......	......	1	......	......	......	......	......	......	......
9	Montgomery	1	1	4	2	......	3	3	1	21	16	19	23	45	3	5	1	......	......	......	2	3	3	1	4	4	1	......	......	......	......	2	3	1	......	......	......	......	......
4	Otsego	......	2	1	1	......	2	1	......	16	12	13	30	30	2	1	1	......	......	......	......	......	4	......	2	1	1	......	......	......	1	1	1	1	......	......	......	......	......
4	Schoharie	......	1	2	1	......	3	......	......	19	19	11	22	33	......	4	......	......	......	......	3	1	......	......	1	3	......	......	......	......	......	......	2	2	......	......	......	......	......
7	Herkimer	1	3	3	......	......	4	1	1	23	21	23	30	35	1	2	3	......	1	......	2	1	4	......	1	2	2	1	1	1	......	3	2	1	1	......	......	1	......

2	Washington	......	1	1	......	......	......	......	......	17	30	......	......	36	......	2	......	......	......	......	1	......	1	......	2	......	......	......	......	......	......	......	......	......	......	...	...	...	...
3	Saratoga	......	1	1	......	......	1	......	1	20	12	......	......	30	1	2	......	......	......	1	1	......	1	......	2	......	1	......	......	......	......	......	......	......	......	...	...	...	...
4	Schenectady	......	......	3	1	......	1	2	1	22	15	......	22	30	......	4	......	......	......	......	1	1	1	1	2	2	......	......	......	......	1	1	......	......	......	2	...	...	...
7	Rensselaer	......	4	......	3	......	5	......	1	22	17	25	......	39	3	1	......	3	......	1	1	5	......	......	2	4	1	......	......	......	......	1	......	......	......	...	...	...	...
5	Albany	......	4	1	......	......	1	1	3	23	20	......	......	41	1	1	1	1	1	......	2	......	3	......	1	3	1	......	......	......	......	......	1	......	......	...	...	...	...
5	Columbia	3	2	......	......	......	1	3	......	20	18	......	30	28	2	3	......	......	......	1	2	1	1	......	1	4	......	......	......	......	......	......	......	......	......	...	...	...	...
5	Greene	2	2	1	......	......	2	1	......	20	24	15	20	50	4	1	......	......	......	1	1	2	1	......	4	1	......	......	......	......	......	......	1	......	......	...	...	...	...
5	Dutchess	......	3	1	1	......	3	2	......	18	17	......	......	33	2	3	......	1	......	2	1	2	1	......	1	1	3	1	......	......	......	......	......	......	......	...	1	...	1
1	Ulster	......	......	......	......	......	......	......	......	......	......	......	......	......	......	1	......	......	......	......	1	......	......	......	......	1	......	......	......	......	......	......	......	......	......	...	...	1	...
2	Putnam	......	......	2	......	......	......	2	......	......	22	......	......	42	......	1	1	......	......	......	2	......	......	......	......	2	......	......	......	......	......	......	......	......	......	1	1	...	...
7	Orange	5	2	......	......	......	5	1	......	20	16	......	......	35	......	2	4	1	......	1	2	4	......	......	......	3	4	......	......	......	......	......	......	......	......	...	...	...	...
2	Rockland	......	......	2	......	......	......	2	......	20	24	......	......	32	......	......	......	2	......	......	......	1	1	......	1	1	......	......	......	......	......	......	......	......	......	...	...	...	...
4	Westchester	......	1	3	......	......	1	2	......	18	13	......	......	30	......	1	......	3	......	1	2	1	......	......	......	2	1	1	......	......	......	......	......	......	......	...	...	...	...
....	Richmond	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	...	...	...	...
6	Queens	1	2	1	2	......	2	......	......	20	18	......	......	30	1	1	2	2	......	......	4	1	......	......	2	3	1	......	......	......	......	......	......	......	......	...	...	...	...
4	Suffolk	1	....	1	1	1	......	1	......	19	13	......	......	37	......	3	......	1	......	......	4	......	......	......	......	3	1	......	......	......	......	......	......	......	......	...	...	...	...
3	Chautauqua	......	1	2	......	......	......	2	......	16	......	20	15	36	1	2	......	......	......	......	......	1	......	2	1	1	1	......	......	......	......	......	......	......	......	...	...	...	...
3	Cattaraugus	2	1	......	......	......	1	1	......	18	15	15	25	37	1	2	......	......	......	......	......	1	1	......	......	2	1	......	......	......	......	1	......	......	......	...	...	...	...
9	Allegany	2	5	......	......	1	4	......	3	19	12	16	26	34	5	4	......	......	......	......	3	1	5	......	1	7	1	......	......	......	......	1	......	......	......	...	...	...	...
7	Steuben	3	3	......	......	......	3	......	......	23	16	16	28	36	2	5	......	......	......	......	3	1	3	......	1	3	3	......	......	......	1	2	2	......	......	...	...	...	...
9	Chemung	3	5	1	......	......	5	3	1	20	17	15	27	39	3	6	......	......	......	......	4	4	1	......	2	7	......	......	......	......	1	......	......	......	......	1	2	6	...
6	Tioga	1	4	1	......	......	3	2	......	16	13	16	18	37	2	3	1	......	......	......	......	3	2	1	2	4	......	......	......	......	1	......	......	......	1	2	...	1	...
1	Broome	......	1	......	......	......	1	......	......	15	20	22	30	30	......	1	......	......	......	......	......	......	1	......	......	1	......	......	......	......	......	......	......	......	......	...	...	...	...
4	Delaware	......	1	1	1	......	2	......	......	20	12	15	25	35	......	2	2	......	......	......	1	2	1	......	1	3	......	......	......	......	......	2	1	......	......	...	...	...	...
3	Sullivan	1	1	1	......	......	3	......	......	9	20	......	......	25	1	2	......	......	......	......	2	1	......	1	2	......	......	......	......	......	......	......	......	......	......	...	...	...	...
8	Lewis	.....	1	4	3	......	5	1	......	20	16	17	33	36	......	6	2	......	......	......	1	5	2	......	3	4	1	......	......	......	1	3	4	......	......	...	...	...	...
7	Jefferson	......	2	......	4	1	4	1	2	13	17	24	29	46	......	4	1	2	......	......	1	4	2	......	4	3	......	......	......	......	2	1	1	2	......	...	...	...	...
9	St. Lawrence	1	5	3	......	......	4	2	1	24	18	18	29	33	4	4	......	1	......	......	......	2	7	......	......	6	3	......	......	......	1	1	2	......	......	...	...	...	...
4	Franklin	......	4	......	......	......	1	3	......	15	13	18	33	40	1	3	......	......	......	......	1	2	1	......	......	2	1	......	......	......	......	1	3	......	......	...	...	...	...
3	Clinton	......	2	1	......	......	1	2	......	22	14	21	31	47	1	2	......	......	......	......	......	2	1	......	1	......	1	......	......	......	......	......	......	......	......	...	...	...	...
1	Essex	1	......	......	......	......	......	......	......	......	10	20	25	30	......	......	......	1	......	......	1	......	......	1	......	......	......	1	......	......	1	......	......	......	......	...	...	...	...
....	Warren	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	...	...	...	...

EXTRACTS FROM CORRESPONDENCE.

Niagara county. J. S. Woodward, Lockport, July 24: — All grain crops are very good. Potatoes promise a large crop. Fruit almost an entire failure, except grapes, plums and quinces, which promise to be very abundant.

Orleans county. J. H. Perry, Ridgeway, July 23: — The fruit crop is almost a failure; apples very few; peaches less than a quarter of a crop. A large acreage of beans on the ground, and looking well.

Orleans county. M. H. Phillips, Hulberton, July 25: — Just commencing wheat harvest. The crop is a fair one. A large acreage was planted to beans in this vicinity, which must prove a very light crop unless we get rain soon.

Orleans county. U. C. Rogers, Albion, July 29: — At the beginning of May the prospect (for the wheat crop) was the poorest, I think, I ever saw. Rains through the latter part of May and early part of June gave us a good hay crop, and the wheat we now have (20 to 25 bushels per acre) which is more than any one expected could possibly come under any conditions.

The apple crop has been the greatest surprise. The trees blossomed so very full that it was expected to be one of the greatest fruit years we had ever had. For some reason, not yet fully understood, our fruit crop has disappeared.

Genesee county. W. Cole, Batavia, July 29: — Wheat, hay and most of the barley harvested; the two latter the best ever grown in this county.

Monroe county. E. S. Hayward, Rochester, July 25: — Late planted corn, on good ground, is growing fast and looks well; about ten days late. Early potatoes are suffering for rain, and the tops are withering.

Monroe county. William Newton, Henrietta, July 28: — The apple crop will be very light, no better than last season. The trees were very full of blossoms, but for some cause very few apples set, and most of these have dropped off. It was the same with the pear trees.

Monroe county. F. H. Beckwith, Gates, July 29: — The wheat crop early in the spring looked very badly, but the subsequent rains gave it a fine growth, and it will turn out fully an average crop, both in quantity and quality. The hay crop is a fair one, but not up to that of last year. Oat crop fully an average. Corn was planted late, and the present dry weather and cold nights checking its growth, the crop must be a light one. Potatoes are suffering much from drought.

Monroe county. D. E. Rogers, Scottsville, July 30: — We have just finished harvesting one of the finest crops of hay and grain for many years.

Livingston county. W. A. Brodie, Geneseo, July 24: — Early in the spring it was generally supposed that the wheat crop was ruined beyond redemption. Now, while there are some spotted fields, the yield will be large.

Livingston county. W. A. Wadsworth, Geneseo, July 28: — The "worm" is working in the beans in some places.

Livingston county. G. D. Mercer, Geneseo, July 31: — Beans are looking fine, increased acreage. Peach crop a failure; apples a partial failure.

Wyoming county. J. O. McClure, Warsaw, July 24: — All crops bid fair to be immense with the exception of corn, and that, with a late fall, will mature and produce a large crop.

Wyoming county. H. T. Brooks, Pearl Creek, July 31: — Hay is of good quality and a good yield; but clover, and to some extent timothy, had suffered seriously from the winter and from insects, and the crop is probably not above an average. No rain here for four weeks.

Wayne county. A. F. Sheldon, Lyons, July 24: — Peppermint set this year is very fine; but last year's sets were winter killed and will yield very little. On the whole, I have not seen such good crops in Wayne county since the war.

Wayne county. F. S. Peer, East Palmyra, July 24: — Peppermint is looking very well and promises a good yield.

Wayne county. J. S. Roys, Lyons, July 25: — With very favorable weather, corn may be a good average crop. Early potatoes are not yielding as well as the large growth of vines would indicate. The quality of the wheat will be superior. The plant of beans is large. Onions good, except on low, cold lands. Peppermint a light crop.

Wayne county. D. V. Teller, Lyons, July 27: — Hay crop in this vicinity all gathered in, and is in every respect first quality. Clover was almost a failure. No wheat threshed; berry very plump, and straw very large and bright; may average twenty five bushels.

Wayne county. G. W. Marshall, Palmyra: — I have put the average of wheat at eighteen bushels, as this is a good wheat-growing district; still it is likely to fall below that figure. There is some rust; consequently uneven ripening, more or less shrunken wheat.

Ontario county. W. P. Ottley, Phelps, July 24: — Good crops thus far, and good prospects for all except apples. No peaches.

Ontario county. Harvey Stone, Reed's Corners, July 29: —Harvesting a more than average crop of plump, beautiful wheat, and valuable bright straw. Barley, if the weather continues favorable, will be as excellent a crop as that of wheat.

Ontario county. R. C. Beach, Richmond Mills, July 31: — The large kind of clover is filling fairly, I think.

Yates county. N. H. Green, Rushville, July 24: — Wheat not so thick on the ground as it sometimes is; but the stools are large, heads long and well filled, and a fine prospect for more than an average crop. Apple crop very light; peaches, none at all, supposed to be caused by an insect on the leaves of the apple and peach trees; of many peach trees the leaves have all dropped off.

Yates county. James Miller, Penn Yan, July 26 — Wheat in this vicinity above the average. The same is true of rye. The acreage of hay much greater (than last year), and the yield also. Corn planted late on undrained soil has been much injured; on drained or dry soil promises a full crop.

Seneca county. R. J. Swan, Fayette, July 24: — There are some very good pieces of corn, but they are few. Apples, which last spring gave promise of being a very large crop, will be almost a failure. Pears will be a very small crop. Most other fruits up to average.

Seneca county. Diedrich Willers, Jr., Varick, July 26 : — The grain crop of the county promises very favorably, although in the central towns, Varick and parts of Romulus and Fayette, the wheat crop is moderate. Peaches an entire failure. Apple crop an increase over last year, but not as great as former biennial yields.

Seneca county. W. W. Stacey, Fayette, July 25 : — In Fayette, Waterloo and part of Seneca Falls the wheat is of uniform quantity and quality, and is a good crop ; but I do not think it will average over twenty-five bushels per acre. The spring has been very wet, and much of the oats on undrained land is very short and backward. The present warm weather is bringing corn along rapidly; but it is at least three weeks behind, and I do not see how, under the most favorable circumstances, it can make over half a crop. Clover, more and better than for some years; but a new worm is noticed, which eats the leaves badly in patches. Timothy very heavy and good. The new grass seedings have made a good catch.

Cayuga county. J. J. Thomas, Union Springs, July 27: — No attempts to predict future growth or success of crops can be reliable. A striking instance occurred this year with wheat. The same farmers who were sure last spring that we should not have more than half a crop now assert the crop to exceed any for many years.

Cayuga county. H. Tryon, Fleming, July 27 : — Hay has been gathered without rain, and is of very fine quality and great quantity.

Cayuga county. N. H. Lockwood, Auburn, July 31 : — Apples do not promise as well as was expected this, the bearing, years, owing to the louse on the leaves.

Cayuga county. Charles W. Brown, Auburn, July 31: — Old inhabitants think hay the heaviest ever known. The insects destroying the slugs of the potato beetle are quite numerous.

Cayuga county. D. M. Osborne & Co., Auburn, July 22:—We have not had such crops in ten years. This applies to every thing except corn, which will be a fair crop. Perfect weather to do our harvesting.

Tompkins county. I. P. Roberts, Ithaca, July 25 :— Season too cold for corn, and is now too dry for both corn and potatoes. Wheat wasting badly because of scarcity of harvest hands.

Tompkins county. Edgar Brewer, Enfield Centre, July 26 :— It rarely occurs that both wheat and grass are as good after so unfavorable a March and April. Pastures are looking vastly better than usual at this date. Wheat, straw large, and heads large and well filled ; not as even as some years, owing to winter-killing in spots, but not injured by rust.

Schuyler county. Jesse Lyon, Catharine, July 31 :— Apple trees blossomed very full, but for some reason, the prospect for apples is very poor. Grapes appear to be doing well.

Onondaga county. John Raynor, Onondaga, July 26 :— Taking the crops as a whole, I think we never had any better than this year. Corn is backward, yet with favorable weather we may have a fair harvest. The prospect is poor for apples.

Onondaga county. J. Henry Smith, Fayetteville, July 27:— Just beginning to be pinched a little with drought, after an unusually wet season. Apples, fruit set heavily, but they are withering and dropping off, owing, it seems, to lice which so injured the foliage as to give the trees the appearance of having been struck with blight.

Onondaga county. S. B. Wallace, Borodino, July 27:— This may be called a year of plenty in every respect. Corn is backward but looking well. Potatoes, unless we have rain, will be a short crop.

Oswego county. H. M. Baird, Mexico, July 28:— Crops are looking better than last year; we have had plenty of rain; it begins to be dry now, but nothing serious.

Cortland county. J. H. Hull, Cortland, July 27:— The hay crop is immense, and the quality is first class.

Chenango county. John Banks, Bainbridge, July 25:— More winter wheat raised than ever before in the town. Red clover nearly all winter-killed, but coming in nicely in meadows mowed early. More white clover than before in years.

Chenango county. W. S. Moore, Jr., Mount Upton, August 1:— It is very dry, no rain since the first week in July. Apple trees loaded.

Madison county. G. H. Babcock, Brookfield, July 24:— Hop vines just coming into bur, many bare poles, and many hills alive now will perfect no hops this season.

Madison county. R. H. Avery, Canastota, July 28:— Large hay crop in remarkably good condition. Wheat plump and fine. Oats and barley generally looking splendid. A sort of leaf louse has seriously injured the prospect for a fine yield of apples, yet a fair prospect for them.

Madison county. H. S. Gardiner, M. D., Hamilton, July 29:— In the town of Madison they have built a mill for the manufacture of sugar from sorghum.

Madison county. H. Cass, Chittenango, July 29:— Late potatoes will not be worth digging unless we have frequent rains from this time out; early potatoes small and not many in a hill.

Madison county. Button Bros., Chittenango, July 31:— If the dry weather holds much longer the potato crop will be pretty poor.

Oneida county. S. W. Fiske, Boonville, July 24:— The season, though late, is going to even up with our best.

Oneida county. L. L. Wight, Whitestown, July 24:— Potatoes have the best looking vines I ever saw, and the fullest blossoms.

Oneida county. J. V. H. Scoville, Paris, July 31:— Notwithstanding the fresh and abundant growth of grass, the product of milk, as delivered at the cheese factories in Central New York, is very far below the average of last year. It is thought to be owing to the fact that many dairies, because of the high price of hay and feed last spring, commenced the season in a poor, run-down condition.

Fulton county. Levi T. Marshall, Gloversville, July 24: — Generally, all crops will be good, except fruit, which is a failure in this county.

Montgomery county. A. H. Burtch, Fonda, July 24: — This county will have an average crop of corn should the weather continue favorable for a few weeks, without too early frost.

Montgomery county. G. H. F. Van Horne, Fonda, July 31: — Indications fair for good fall feed; no plums; the apple crop is not so good as anticipated; also the pear crop. Buckwheat looks fair for a good crop.

Otsego county. C. P. Root, Gilbertsville, July 24: — Average product of butter and cheese ten to fifteen per cent less than last year from same number of cows.

Otsego county. H. K. Jarvis, Cooperstown, July 26: — Rain has helped grass and oats, but retarded hops and corn. Hops past help. Corn may, if August proves a warm month, make a very good crop.

Schoharie county. N. Manning, Middleburgh, July 25: — Hay crop was excellent. Wheat, rye, corn, oats and potatoes bid fair to be first-rate crops.

Schoharie county. R. H. Stoddard, Schoharie, July 26: – Wheat, rye and oats *extra.*

Schoharie county. A. B. Larkin, Warnerville, July 27: — Hops were very backward, and a large number of yards were very badly winter-killed, or grub eaten, so that they were very weak and made a late start. Corn about the same as last year.

Herkimer county. Josiah Shull, Ilion, July 25: — Frequent rains and cool weather have been very favorable for hay or grass, oats, wheat and potatoes. The season is about fifteen days later than the past two or three years.

Herkimer county. Seth Bonfoy, West Winfield, July 31: — In this immediate locality the potato crop must be a failure without a marked change in the weather soon. Hops at this time are looking well.

Herkimer county. D. E. Mixter, Jordanville, July 31: — The hay crop far exceeds expectation. The acreage of potatoes is larger than for many years. If the weather continues favorable the yield will be large. The hop crop will be one-third less than last year.

Herkimer county. Harris Lewis, Frankfort, August 1: — Clover from last year's seeding has not been more than thirty per cent of a full crop. Apples will be less than half the usual crop, although the bearing year.

Rensselaer county. Charles Wing, Lansingburgh, August 2: — Crops of all kinds which have been harvested are very much above the average. Corn and potatoes now promise an abundant yield.

Rensselaer county. Abel Merchant, Nassau, July 25: — Potatoes have a good growth of tops, and are well set.

Rensselaer county. O. J. Lewis, Schodack Centre, July 31: — In want of rain, and if it does not come soon, corn and potatoes will not be average crops. Pastures are drying up.

Columbia county. James Bain, Chatham, July 31: — Though a somewhat backward spring, the crops in general are looking finely.

Greene county. B. G. Morss, Red Falls, July 24: — Butter good, and good season for making butter. Fruit dropping badly.

Dutchess county. Martin Heermance, Rhinebeck, July 25: — More hay from old meadows this year than last. Rye crop unusually good. Wheat also good. Prospect for oats improved very much lately. Corn catching up rapidly. Potatoes looking remarkably well where the ground is not too low and heavy.

Dutchess county. Henry Dodge, Beekman, July 29: — We are having quite a drought at present. If we should have rain very soon, it would help corn so that we might have a very good crop; so with potatoes.

Orange county. H. E. Alvord, Mountainville, July 25: — The moisture, which has held on so late and done so much good, has now disappeared, and the county is suffering for want of rain.

Orange county. C. E. Young, Mountainville, July 25: — The abundant rains have largely increased hay and grain crops. Fully one-third more hay will be harvested than in 1881. At present we have promise of dry weather, and pastures and new seeding want rain.

Orange county. S. Parsons, Oxford Depot, July 28: — A very growing summer, all crops good, but the drought begins to tell now. I have twelve acres of corn as good as I ever had at this time of the year.

Westchester county. James Wood, Mount Kisco, July 28: — The season was very backward in May, but very favorable for all crops in June. It has been very dry in July, and unless we have rain soon, all fall crops will suffer greatly.

Queens county. Benjamin D. Hicks, Old Westbury, July 26: — Average good season, plenty of rain early, a little dry now, but nothing suffering yet. The army worm appeared, but not in large numbers, and the damage was slight.

Suffolk county. A. M. Salmon, Peconic, July 25: — During the spring and ealy summer we had plenty of rain, and all crops have done unusually well up to the middle of July. Since then we have had no rain, comparatively, and some crops, including pastures, begin to show the effect of drought.

Suffolk county. William Crozier, Northport, July 27: — Oats and peas seem to be the leading crop, with mangolds. Every farmer for miles has oats and peas and a patch of mangolds. Pickles (cucumbers) are becoming a farmer's crop. Some farmers have ten acres and few have less than two.

Chautaqua county. A. Z. Madison, Fredonia, July 26:—No peaches no plums, next to no cherries. Apples next to nothing. Many orchards of 40 to 50 trees will not yield three bushels.

Cattaraugus county. Halsey Safford, East Otto, July 29: — Our fall wheat is splendid; our crops all look well, but late.

Cattaraugus county. H. S. Huntley, Little Valley, July 31: — The hay crop in this county is the best we have had for many years. Wheat is a good crop. Potatoes never promised a better crop at this season. Apples dropped badly when small and the crop will be very light. Pastures in fine condition, though the weather is now getting to be a little too dry for every thing but corn.

Allegany county. J. H. Rutherford, Angelica, July 24: — An unusually wet and backward spring, so haying was fully two weeks later than usual. Wet weather killed out some of the grain, otherwise grain is looking very fine. We are getting hay in good order. Corn is very backward and cannot be a good crop. Hardly any apples.

Allegany county. A. L. Thomas, Cuba, July 30: — The cold wet spring made the crops, most of them, late in the ground, but are looking fine; on an average better than last year, and, so far this season, the pastures have yielded a full supply of feed for milch cows, which have given accordingly of milk.

Allegany county. L. D. Utter, Friendship, August 1: — The season has been very favorable for hay, larger quantity and in finer condition than last year. Winter wheat is headed very nicely, but stands quite thin on the ground; the quality good. The oat crop looks very promising. Corn crop looks good though very late. Potatoes never looked finer and a large acreage.

Allegany county. George H. Swift, Cuba, August 1: — The potato crop never looked better than at the present time. The hay crop is very heavy and of good quality.

Steuben county. T. M. Younglove, Hammondsport, July 25: — Although this is the bearing year for apples, I think the crop will be light. The pear crop also light, and no peaches. The grape crop is very promising, although later than common. I do not think the crop extremely heavy, but, perhaps, quite as heavy as is for the benefit of the vineyards.

Steuben county. James L. Packer, Corning, July 29: — The crop of fall wheat is the best I ever saw. Hay heavy in the valleys; back on the hills, ordinary. Pastures have been first-rate all summer, but are getting a little short now, as we need rain.

Steuben county. L. C. Kingsbury, Corning, July 31: — Our tobacco never was so backward and uneven at this time of year. Corn is coming on very finely.

Chemung county. W. A. Armstrong, Elmira, July 29: — The spring was very backward; prospects very discouraging until near the middle of May, when abundant rains started growth with amazing rapidity, and subsequent timely showers or protracted rains maintained it. On many farms grass is quite double the average yield, and the quality very good. But haying and harvest have been nearly or quite two weeks behind their usual time.

Chemung county. A. S. Diven, Elmira, July 24: — Wheat in some wet ground was winter killed; but wherever this is not the case the crop is exceedingly good. We have had for the last ten days the best of weather for harvesting.

Chemung county. M. C. Bennett, Horseheads, July 29: — Tobacco is looking fair, though the cut worm did considerable damage, and some fields are quite uneven. The present indications are favorable for about three quarters of a crop. Amber sugar cane is growing in favor. The present crop is looking fair. Apple crop light.

Tioga county. F. C. Lowman, Hooper's Valley, July 25: — Apples will be with us almost a total failure. Corn not a good stand.

Tioga county. Robert Howell, Nichols, July 27: — Apple crop very light and wormy, perhaps not more than one-eighth or one-tenth of a crop. Peaches, not any.

Tioga county. G. J. Nelson, Oswego, July 29: — Corn is about ten to fourteen days late; otherwise it is doing well, and bids fair to be an average, with favorable weather until the middle of September.

Broome county. Robert Hogg, West Chemung, July 26: — Winter wheat is good, what there is, but many fields have been sowed over in the spring, some with oats, some with barley. Oats are very spotted by the continued cold weather after sowing, and we are blaming the wire-worm for eating the roots in the spring. Clover is entirely gone from our meadows, both new and old, but what timothy the open winter left has done finely. No amount of corn weather can possibly give us even a fair crop; it is small and puny.

Delaware county. A. S. Gibbs, Harpersfield, July 27: — Hay crop very uneven, new seedling badly hurt by frost. Dry meadows good. Moist meadows light. Wet meadows good. Some claim to have a better crop than last year. My own is about the same. Many estimate a quarter to one-half less. Buckwheat is looking well, and promises a good crop.

Delaware county. I. E. Sherman, Sidney Plains, July 29: — Our season, though late in the spring, has been favorable for growth of all kinds. It is now a little too dry, and if it continues will cut short fall feed. Our great staple is butter, and of this there has been a good make.

Sullivan county George W. Decker, Monticello, July 24: — Hay and rye are both splendid crops. Apples are falling off rapidly. Pears are scarce.

Sullivan county. W. S. Thornton, Monticello, July 29: — With the exception of the corn crop, the promise of good yields is the best for a number of years. Plenty of rain has kept the pastures up.

Lewis county. B. B. Miller, Lowville, July 24: — South part of Lewis county and northern Oneida, hay is equal with last season. Central and northern Lewis not quite up, but better quality everywhere. Winter wheat killed out badly; what is left looks well. Spring wheat, oats and barley are all looking finely. Potatoes promise a large yield, with nearly double the acreage of former years. Hops are looking better at south end of Lewis county than in the center and north; will average a little over three-quarters of last season's crop.

Jefferson county. G. C. Bradley, Watertown: — The hay crop is reported by people traveling through the country much better than it really is. They are deceived by the appearance of the grass, which is generally tall, and looks well as you pass by, but being thin, yields a light crop. Many hops were winter-killed, and an extensive grower told me yesterday that the vines are quite lousy.

Jefferson county. Amos Goulding, Evans' Mills, July 31: — The falling off of the hay crop (one-half) is owing to the open winter. I hear that in the towns of Orleans and Theresa it is a fair average, and east of here it is said to be a fair crop.

Jefferson county. S. D. Hungerford, Adams, July 28 — The pea and bean crops, for seed purposes, to which a very large acreage in this county is devoted, promise to be above average.

St. Lawrence county. C. T. Hulburd, Brasher Falls, July 26 :— We have had a very peculiar season, cold, wet and backward ; good for grass, but bad for low and flat lands. Potatoes, though late, are looking well where not on low lands. On uplands, all crops, except corn, are looking very fine.

St. Lawrence county. H. D. Leonard, Crary's Mills, July 30 :—The outlook in the spring for all crops was very bad, but plenty of rain gave us a good crop of hay, and grain of all kinds is looking nicely, except corn, which must be a light crop unless August and September are very favorable. The condition of our pastures at present is below an average.

St. Lawrence county. W. L. Rutherford, Waddington, July 26 :— Spring wheat is of extra promise, as also oats. Corn is late, but looking fairly well in color, and if it escapes early frost there will be a fair crop.

Franklin county. S. A. Beman, Malone, July 25 :— The corn crop may turn out much better than supposed, the weather being very propitious for corn just now. Hops are backward, and a short crop must be looked for. On the whole, the farming interests of this county are in good shape.

BULLETIN NO. 6 — NOVEMBER, 1882.

NEW YORK STATE AGRICULTURAL SOCIETY,
ALBANY, *November* 21, 1882.

On the twenty-sixth of October, a circular was issued requesting answers to the following questions:

1. CORN: How does the yield compare with last year?
2. POTATOES: How does the crop compare with that of last year;
   - *a.* As to quantity?
   - *b.* As to quality?
   - *c.* What varieties of potatoes constitute the main crop this year, naming them in order of popularity?
   - *d.* What varieties have succeeded best this year?
3. WINTER WHEAT:
   - *a.* Is the area sown this autumn greater or less than last year?
   - *b.* What is its present condition?
   - *c.* What varieties of wheat have been sown this autumn, naming them in order of popularity?
4. WINTER RYE:
   - *a.* Is the area sown this autumn greater or less than last year?
   - *b.* What is its present condition?
5. CLOVER SEED:
   - *a.* Have you a *good, average* or *poor* crop?
   - *b.* If not good, what is the cause?

The number of circulars sent out was 465. To these 234 replies have been received. The issue of this bulletin has been delayed in consequence of the returns coming in very slowly.

Thanks are rendered to the correspondents who have contributed the information now presented.

From the tabulated replies it will be seen that the more remarkable characteristics of the season are the improvement, beyond expectation, of the corn crop, and the disappointment, very generally, of the early promise of the potato crop. From the remarks contributed by correspondents, and printed after the tables, it will be seen that the season has been marked by a severe and long-continued drought, affecting all but the most northern counties; that their reports of the condition of autumn-sown grain are consequently, with some notable exceptions, more or less unfavorable; and that, at the same time, with few exceptions, they report satisfaction with the general results of the farming operations of the year.

A singular occurrence is the general failure of the apple crop, except in the northern counties, in the bearing year.

Replies to Circular No 3, Autumn of 1882.

Number of replies received.	Counties in five groups.	Question 1. Corn: How does the yield compare with last year?					Question 2, a and b. Potatoes: How does the crop compare with that of last year?								Question 3, a. Winter Wheat: Is the area sown this autumn greater or less than last year?					Question 3, b. Winter Wheat: What is its present condition?				Question 4, a. Winter Rye: Is the area sown greater or less than last year?					Question 4, b. Winter Rye: What is its present condition?				Question 5. Clover Seed:							
							As to quantity.					As to quality.																					a. Have you a good average, or poor crop?			b. If not good, what is the cause?				
		Much more.	More.	Equal.	Less.	Much less.	Much more.	More.	Equal.	Less.	Much less.	Better.	Equal.	Worse.	Much more.	More.	Equal.	Less.	Much less.	Very good.	Good.	Poor.	Very poor.	Much more.	More.	Equal.	Less.	Much less.	Very good.	Good.	Poor.	Very poor.	Good.	Average.	Poor.	Winter killing.	Drought.	Insects in the head.	Insects at the roots.	Insects at root and in head.
1	Erie	1	....	....	....	....	....	....	....	1	....	....	1	....	....	....	1	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	1	1	....	....	....	....
3	Niagara	....	1	....	....	2	....	1	1	....	1	3	....	....	....	....	2	1	....	....	3	....	....	....	....	....	....	....	....	....	....	....	....	....	3	1	....	1	....	1
3	Orleans	....	1	....	2	....	1	....	....	2	....	....	3	....	....	2	1	....	....	....	3	....	....	....	....	....	....	....	....	....	....	....	....	1	2	....	....	1	....	1
2	Genesee	....	....	1	....	1	....	....	....	1	1	....	2	....	....	....	2	....	....	....	1	1	....	....	....	....	....	....	....	....	....	....	....	....	2	....	2	....	....	....
9	Monroe	1	4	2	1	1	1	1	4	....	3	2	6	....	....	4	4	....	1	3	4	1	1	....	....	....	....	....	....	....	....	....	....	2	6	1	4	....	....	2
7	Livingston	1	2	1	2	1	....	2	1	....	4	3	3	1	....	3	4	....	....	2	4	1	....	....	....	....	....	....	....	....	....	....	....	2	5	1	2	1	1	....
...	Wyoming	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
3	Wayne	1	....	2	....	....	1	2	....	....	....	1	1	1	....	1	1	1	....	1	2	....	....	....	1	....	....	....	....	1	....	....	....	....	3	....	....	....	3	....
6	Ontario	1	1	....	2	2	....	....	2	2	2	2	3	1	....	....	3	1	1	1	3	2	....	....	....	....	....	....	....	....	....	....	....	....	6	1	....	....	1	3
2	Yates	....	2	....	....	....	....	1	1	....	....	1	1	....	....	....	1	1	....	....	....	2	....	....	1	....	....	....	....	1	....	....	....	....	2	....	....	....	2	....
5	Seneca	1	1	2	1	....	1	2	....	....	2	2	3	....	....	2	1	4	....	....	1	4	....	....	....	....	1	....	....	1	....	....	....	1	4	....	1	....	1	2
6	Cayuga	....	2	2	....	2	....	3	1	1	1	....	5	1	....	1	2	1	2	....	4	2	....	....	....	....	....	....	....	....	....	....	....	1	5	1	3	....	2	....
7	Tompkins	1	1	3	1	1	2	4	1	....	....	2	5	....	....	3	2	....	1	1	3	3	....	....	....	....	....	....	....	....	....	....	....	1	5	....	1	1	2	1
3	Schuyler	....	2	....	1	....	....	3	....	....	....	2	1	....	....	1	2	....	....	....	3	....	....	....	2	1	....	....	....	3	....	....	....	....	3	....	1	2	....	....
12	Onondaga	3	7	1	1	....	3	2	5	2	....	6	6	....	....	4	6	1	....	3	6	3	....	....	....	3	2	....	....	5	....	....	....	1	9	2	4	1	1	2
4	Oswego	....	2	....	2	....	....	3	....	1	....	2	2	....	1	2	1	....	....	....	3	1	....	....	1	2	....	....	....	2	1	....	....	1	....	....	....	....	....	....
3	Cortland	....	....	2	1	....	2	....	1	....	....	1	2	....	....	....	2	1	....	....	3	....	....	....	....	2	....	....	....	2	....	....	....	1	1	....	....	1	....	....
7	Chenango	....	....	1	3	3	2	4	1	....	....	4	3	....	....	3	3	1	....	2	4	1	....	....	2	2	....	....	....	3	1	....	....	....	....	....	....	....	....	....
9	Madison	2	....	1	3	3	....	3	1	2	3	4	5	....	....	3	5	1	....	3	6	....	....	....	1	....	....	....	....	1	....	....	....	1	4	3	1	....	....	....
10	Oneida	1	2	....	4	2	2	2	2	3	....	3	4	2	....	3	4	2	....	4	5	1	....	....	1	3	1	....	2	4	1	....	....	....	....	....	....	....	....	....
2	Fulton	....	....	2	....	....	....	1	....	1	....	1	....	1	....	1	1	....	....	....	1	1	....	....	1	1	....	....	....	1	1	....	....	....	....	....	....	....	....	....
7	Montgomery	....	....	....	3	4	1	4	1	....	1	3	4	....	....	1	3	2	....	2	3	2	....	....	....	2	3	1	3	3	1	....	....	1	3	2	1	....	....	....
6	Otsego	....	....	1	3	2	....	2	3	....	1	4	2	....	....	....	3	3	....	2	4	....	....	....	....	3	....	....	....	3	....	....	....	....	1	....	1	....	....	....
3	Schoharie	....	....	....	1	2	....	1	1	....	1	....	2	1	....	2	....	1	....	....	3	....	....	....	2	....	1	....	....	3	....	....	....	....	....	....	....	....	....	....
4	Herkimer	....	....	....	....	3	....	....	2	2	....	....	4	....	....	3	1	....	....	1	3	....	....	....	....	2	2	....	....	4	....	....	....	....	....	....	....	....	....	....

4	Washington	......	2	......	1	2	......	1	2	......	1	......	1	3	......	......	1	1	......	......	1	1	......	......	......	3	1	......	1	3	...	...	...	......	......	......	......	......	......	......
4	Saratoga	......	4	......	......	2	2	1	1	......	......	1	3	......	......	......	3	1	......	2	2	......	......	......	2	2	......	......	2	2	...	...	...	1	......	......	......	......	......	......
2	Schenectady	......	......	......	1	1	......	1	1	......	......	......	2	......	......	......	......	2	......	......	1	......	1	......	......	2	......	......	...	1	1	...	...	......	......	......	......	......	......	......
6	Rensselaer	......	......	......	......	6	......	......	1	......	5	1	5	......	......	......	2	2	......	......	3	1	......	......	2	3	1	......	1	4	1	...	...	......	......	......	......	......	......	......
5	Albany	......	......	2	2	1	......	2	1	1	1	1	4	......	......	1	1	2	......	......	4	......	......	......	2	2	1	......	...	5	...	...	...	......	......	......	......	......	......	......
5	Columbia	......	......	......	1	4	......	......	......	1	4	......	4	1	......	......	3	......	......	......	3	......	......	......	2	3	......	......	2	3	...	...	...	......	......	......	......	......	......	......
4	Greene	......	......	......	......	4	2	......	......	......	2	1	2	1	......	......	......	2	1	1	2	......	......	......	2	......	2	......	...	3	1	...	...	......	......	......	......	......	......	......
7	Dutchess	1	......	2	3	1	......	4	1	1	1	1	6	......	......	2	3	1	......	1	3	1	......	......	1	3	1	......	4	2	...	...	...	......	......	......	......	......	......	......
1	Ulster	......	......	......	......	1	......	......	1	......	......	......	1	......	......	......	......	......	......	......	1	......	......	......	......	1	......	......	..	1	...	...	...	......	......	......	......	......	......	......
1	Putnam	1	......	......	......	......	......	1	......	......	......	......	1	......	......	......	......	......	......	......	......	......	......	......	1	......	......	......	1	...	...	...	...	......	......	......	......	......	......	......
6	Orange	......	......	......	1	5	......	2	2	2	......	1	4	1	......	1	3	2	......	1	4	1	......	......	2	3	1	......	2	4	...	...	...	......	......	......	......	......	......	......
2	Rockland	......	......	......	1	......	1	......	......	......	......	1	......	......	......	......	1	......	......	1	......	......	......	......	1	1	......	......	1	1	...	...	...	......	......	......	......	......	......	......
3	Westchester	1	1	......	1	......	......	2	1	......	......	1	1	1	......	......	2	......	......	1	1	......	......	......	......	2	1	......	2	1	...	...	...	......	......	......	......	......	......	......
...	Richmond	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	...	...	...	...	...	......	......	......	......	......	......	......
3	Queens	......	......	......	1	1	1	1	1	......	......	1	2	......	......	......	2	1	......	......	3	......	......	......	2	1	......	......	...	3	...	...	...	......	......	......	......	......	......	......
4	Suffolk	......	......	1	2	1	......	......	1	1	2	......	4	......	......	1	2	......	......	1	3	......	......	......	......	4	......	......	...	4	...	...	...	......	......	......	......	......	......	......
5	Chautauqua	......	2	......	2	1	1	3	1	......	......	2	3	......	......	2	3	......	......	1	4	......	......	......	......	1	......	......	...	1	...	...	1	1	2	......	......	......	......	......
2	Cattaraugus	......	......	1	1	......	......	1	1	......	......	......	2	......	......	1	1	......	......	......	2	......	......	......	......	1	......	......	...	1	...	...	...	......	......	......	......	......	......	......
3	Allegany	......	......	1	2	......	......	1	......	2	......	......	2	1	......	......	1	2	......	......	2	1	......	......	......	1	......	......	...	...	...	...	...	......	3	......	3	......	......	......
2	Steuben	2	......	......	......	......	......	1	......	1	......	1	1	......	......	......	1	1	......	......	1	1	......	......	......	......	......	......	...	...	...	...	...	......	2	......	......	......	......	1
8	Chemung	3	2	2	1	......	6	1	1	......	......	5	3	......	......	......	5	3	......	......	5	3	......	......	......	2	......	......	...	...	2	...	...	......	5	1	......	......	2	2
2	Tioga	1	1	......	......	......	......	2	......	......	......	......	2	......	......	1	1	......	......	......	......	2	......	......	......	......	......	......	...	...	...	...	...	......	......	......	......	......	......	......
2	Broome	......	......	1	......	1	......	1	......	......	1	......	2	......	......	......	2	......	......	......	1	1	......	......	......	1	......	......	...	...	1	...	...	......	......	......	......	......	......	......
4	Delaware	......	......	......	2	2	......	1	1	2	......	3	1	......	......	1	......	2	......	......	2	1	......	......	1	......	......	......	...	1	...	...	...	......	......	......	......	......	......	......
2	Sullivan	....	2	......	......	......	......	2	......	......	......	......	2	......	......	......	......	......	......	......	......	......	......	......	1		......	......	2	...	...	...	...	......	......	......	......	......	......	......
4	Lewis	......	1	2	1	......	......	3	1	......	......	2	1	1	1	1	1	1	......	2	2	......	......	......	......	......	......	......	...	...	...	...	...	......	......	......	......	......	......	......
4	Jefferson	......	2	1	......	......	1	2	1	......	......	3	1	......	......	4	......	......	......	1	3	......	......	......	1	1	......	......	1	1	...	...	...	......	......	......	......	......	......	......
8	St. Lawrence	......	3	2	1	......	......	....	......	4	4	......	1	7	......	7	......	1	......	4	3	......	......	......	......	4	1	......	...	5	...	...	...	......	......	......	......	......	......	......
3	Franklin	......	1	1	1	......	...	......	1	1	1	......	3	......	......	......	1	2	......	......	3	......	......	......	......	3	......	......	...	3	...	...	...	......	......	......	......	......	......	......
2	Clinton	......	......	......	1	......	......	......	......	1	1	......	....	2	......	......	......	......	......	......	......	......	......	......	......	......	......	......	...	...	...	...	...	......	......	......	......	......	......	......
2	Essex	......	......	......	2	......	......	......	......	......	2	1	1	......	......	1	1	......	......	......	1	1	......	......	1	1	......	......	..	..	1	...	...	......	......	......	......	......	......	......
...	Warren	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	......	...	...	...	...	...	......	......	......	......	......	......	......

Replies to Circular No. 3, Autumn of 1882 — (Continued).

Number of replies received.	COUNTIES IN FIVE GROUPS.	Question 3, c. What varieties of wheat have been sown this autumn, naming them in order of popularity?	Question 2 c. What varieties of potatoes constitute the main crop this year, naming them in order of popularity?	Question 2, d. What varieties of potatoes have succeeded best this year?
1	Erie	Fultz, Clawson, Mediterranean.	Rose, Peerless, Burbank.	Peerless.
3	Niagara	Clawson, Mediterranean, Fultz.	Rose, Snowflake, Burbank, Peerless, Peachblow, Beauty of Hebron.	Burbank, Snowflake.
3	Orleans	Clawson, Fultz, Bluestem, Mediterranean.	Burbank, Late Rose, Snowflake, Beauty of Hebron.	Burbank, Late Rose.
2	Genesee	Clawson, Fultz	Burbank, Late Rose, Peerless.	Burbank.
9	Monroe.	Clawson, Fultz, Russian, Red, Amber, Longberry Red, Short Red, White Michigan, Wicks.	Burbank, Late Rose, Peerless, Snowflake, Rose, Early Rose, Whipple, Blue Imperial, Genesee Co. King, Early Vermont.	Peerless, Burbank, Late Rose, Whipple, Genesee Co. King.
5	Livingston...	Clawson, Wicks, Red.	Early Rose, Snowflake, Late Rose, Burbank, Peachblow, Peerless.	Snowflake, Burbank, Late Rose, Peerless.
2	Wyoming	Clawson, Lancaster, Fultz.	Burbank, Early Rose, Late Rose, Snowflake, Bang-up Seedling.	Burbank.
3	Wayne	Clawson, Lancaster, Fultz, Blue-stem, Amber.	Burbank, Snowflake, Rose, Late Rose, Peerless, St. Patrick, Blue Seedling.	Burbank, Rose, Late Rose.
6	Ontario	Clawson, Blue-stem, Acme, Soule's, Fultz.	Burbank, Peerless, Beauty of Hebron, Snowflake, Early Ohio, Late Rose, Early Rose, White Elephant.	Burbank, Peerless, Snowflake, Beauty of Hebron.
2	Yates	Clawson, Acme, Fultz.	Burbank, Late Rose, Dunmore, Beauty of Hebron, Early Rose, White Rose, Magnum Bonum.	Burbank, Dunmore.
6	Cayuga	Clawson, Lancaster, Fultz, Acme, Shoemaker.	Burbank, Beauty of Hebron, Early Rose, Late Rose, Mammoth Pearl, Snowflake, Peerless, Early Vermont.	Burbank, Snowflake, Beauty of Hebron, Early Vermont.
7	Tompkins ...	Clawson, Fultz, Lancaster.	Burbank, Snowflake, Early Rose, Late Rose, Beauty of Hebron, Magnum Bonum, Albany Seedling.	Burbank, Late Rose, Snowflake, Beauty of Hebron, Magnum Bonum.
3	Schuyler	Clawson, Fultz, Tredwell.	Burbank, Chili, Early Rose, Beauty of Hebron.	Burbank, Chili.
11	Onondaga....	Clawson, Acme, Tredwell, Fultz, Lancaster.	Early Rose, Beauty of Hebron, Burbank, Snowflake, Late Rose, White Star, Onondaga, Early Ohio, Chili, White Rose, St. Patrick.	Burbank, Beauty of Hebron.
4	Oswego	Clawson, Lancaster, Log Cabin, White Flint, Tredwell, Red.	Late Rose, Burbank, Early Rose, Snowflake.	Late Rose.
3	Cortland	Clawson, Fultz, Tredwell.	Burbank, Snowflake, Late Rose, Beauty of Hebron, Early Rose.	Burbank.
7	Chenango....	Clawson, Gold Medal, Fultz.	Early Rose, Late Rose, Burbank, Snowflake, Peachblow, Brazee's Prolific, Beauty of Hebron, White Elephant, Chili, Peerless.	Late Rose, Early Rose, White Elephant.

Replies to Circular No. 3, Autumn of 1882 — (Continued).

Number of replies received.	COUNTIES IN FIVE GROUPS.	Question 3, c. What varieties of wheat have been sown this autumn, naming them in order of popularity?	Question 2, c. What varieties of potatoes constitute the main crop this year, naming them in order of popularity?	Question 2, d. What varieties of potatoes have succeeded best this year?
9	Madison......	Clawson, Tredwell, Acme, Fultz, Boughton, Bluestem, White Flint, Lawrence.	Late Rose, Burbank, Early Rose, Snowflake, Beauty of Hebron, Peachblow, Brownell's Beauty, Chili, Peerless, Champion of Scotland, Chicago Market, St. Patrick, Davis' Seedling.	Burbank, Snowflake, Late Rose, Beauty of Hebron, Brownell's Beauty, Chili.
10	Oneida......	Clawson, Tredwell, Acme, Jarvis, Lancaster, Red-stem, Gold Medal.	Burbank, Late Rose, Early Rose, Snowflake, Beauty of Hebron, Harison, Early Vermont, P'chblow, Chili, St. Patrick, White Elephant, Dunmore, Pride of America.	Burbank, Late Rose, Early Vermont, beauty of Hebron, Harison, Chili.
2	Fulton	....	Late Rose, Early Rose, Peerless, King of the Earlies, Snowflake.	Late Rose, King of the Earlies.
6	Montgomery.	Clawson, Log Cabin, Gold Medal, Red, Wicks, Tredwell, Lancaster, Fultz, Red-stem, White Flint.	Early Rose, Early Vermont, Peachblow Snowflake, Peerless, Early Ohio, Burbank, Beauty of Hebron, Van Duzen Seedling.	Early Rose, Peerless, Early Vermont, Burbank, Early Ohio, Van Duzen Seedling.
6	Otsego	Clawson, White Club, Fultz.	Early Rose, Burbank, Peerless, Late Rose, Snowflake, St. Patrick, White Elephant.	Burbank, Snowflake, Early Rose, Late Rose, White Elephant, St. Patrick, Beauty of Hebron.
3	Schoharie....	Clawson, Log Cabin, Tredwell, Egyptian, Wicks, Fultz, White Club.	Early Rose, Peerless, Snowflake, Burbank, Late Rose, Beauty of Hebron, Peachblow.	Early Rose, Burbank, Snowflake, Peerless.
4	Herkimer. ..	Clawson, Mediterranean, Tredwell, Log Cabin.	Burbank, Snowflake, Early Rose, Dunmore, Beauty of Hebron, Late Rose, Clark's No. 1, Late Vermont.	Burbank, Clark's No. 1, Beauty of Hebron, Dunmore, Peerless.
4	Washington .	Clawson, Amber, Tredwell.	Peerless, Beauty of Hebron, Burbank, Early Rose, Late Beauty of Hebron, Late Rose.	Pearless, Beauty of Hebron, Burbank, Early Rose, Late Beauty of Hebron.
4	Saratoga....	Clawson, Diehl, Tredwell, White, Michigan, Gold Medal.	Early Rose, Late Rose, Snowflake, Peachbl'w, Beauty of Hebron, Peerless, Burbank.	Late Rose, Beauty of Hebron, Snowflake, Early Rose.
2	Schenectady.	Clawson, Fultz	Early Rose, Snowflake, Chili, Peerless.	Early Rose, Chili.
6	Rensselaer...	Clawson, Log Cabin..	Peerless, Burbank, Late Rose, Early R'se, White Rose, Late Beauty of Hebron, Beauty of Hebron, White Elephant.	Burbank, Late Rose, Peerless, Late Beauty of Hebron, Early Rose, White Elephant.
6	Albany	Clawson, Mediterranean, Log Cabin, Michigan Red.	Burbank, Early Rose, Beauty of Hebron, Snowflake, Early Ohio, Late Rose, Peerless.	Burbank, Early Rose, Snowflake.
5	Columbia. ...	Clawson	Early Rose, Late Rose, Burbank, Snowflake, Peerless, St. Patrick.	Early Rose, Late Rose; St. Patrick.
4	Greene.......	Clawson, Mediterranean.	Early Rose, Beauty of Hebron, Burbank, Snowflake, Late Rose, Late Bea'ty of Hebron.	Snowflake, Early Rose, Burbank.
6	Dutchess... .	Clawson, Mediterranean, Tredwell.	Early Rose, Beauty of Hebron, Burbank, Peerless, Late Rose, Late Beauty of Hebron, St. Patrick, White Elephant.	Beauty of Hebron, Early Rose, Burbank, Late Rose, Peerless, Late Beauty of Hebron.

Replies to Circular No. 3, Autumn of 1882—(Continued).

Number of replies received.	COUNTIES IN FIVE GROUPS.	Question 3, *c.* What varieties of wheat have been sown this autumn, naming them in order of popularity?	Question 2, *c.* What varieties of potatoes constitute the main crop this year, naming them in order of popularity?	Question 2, *d.* What varieties of potatoes have succeeded best this year?
1	Ulster........	....	Early Rose, Peerless.....	Early Rose.
1	Putnam.....	... .	. ...	Late Rose, Burbank.
6	Orange......	Clawson, Tredwell, Coe's Golden Drop, Fultz, Mediterranean, Amber, Egyptian.	Beauty of Hebron, Early Rose, St. Patr'k, Snowflake, Peachblow, Burbank, Late Rose, Late Beauty of Hebron, White Elephant.	Beauty of Hebron, Snowflake Early, Rose, St. Patrick, White Elephant.
2	Rockland	Clawson	Early Rose, Burbank, White Elephant, Early Vermont, Early Ohio, Beauty of Hebron, Queen of the Valley	Early Rose, Early Ohio.
3	Westchester.	Mediterranean, Clawson, Tredwell.	Early Rose, Beauty of Hebron, Late Rose, White Rose, Queen of the Valley, Snowflake.	Beauty of Hebron, Rose, White Rose, Queen of the Valley, White Star.
3	Queens.......	Clawson, Fultz, Amber, Mediterranean.	Early Rose, Late Rose, Early Ohio, Burbank.	Early Rose.
4	Suffolk	Mediterranean, Champion.	Early Rose, Burbank, Late Rose, Beauty of Hebron, St. Patrick, White Elephant, Queen of the Valley.	Beauty of Hebron, White Elephant, Burbank, St. Patrick.
5	Chautanqua..	Clawson, Wicks, Bentley, Blue-stem.	Late Rose, Early Rose, Burbank, Snowflake, Beauty of Hebron.	Beauty of Hebron, Burbank, Late Rose, Snowflake, White Elephant.
2	Cattaraugus..	Clawson Blue-stem ..	Burbank, Early Rose, Late Rose, Snowflake, Prince Imperial.	Burbank, Late Rose, Prince Imperial.
3	Allegany....	Clawson, Wicks, Red.	Early Rose, Late Rose, Burbank, Snowflake, Chili.	Chili, Late Rose, Burbank, Beauty of Hebron.
2	Steuben... ..	Clawson, Fultz, Lancaster.	Snowflake, Early Vermont, Burbank, Chili, Early Rose, Beauty of Hebron,	Early Vermont, Snowflake.
7	Chemung....	Clawson, Fultz, Lancaster, Mediterranean, Heige's Prolific, Wicks, Eureka, Soule's.	Early Rose, Late Rose, Queen of the Valley, Burbank, Beauty of Hebron, Snowflake, Chili.	Queen of the Valley, Rose, Chili, Burbank.
2	Tioga.........	Fultz, Clawson, Wicks,	Burbank, Queen of the Valley, Late Rose, Brazee's Prolific.	Burbank, Queen of the Valley.
2	Broome	Clawson, Redchaff ...	Early Rose, Rose Seedlings, Bulkley's Seedlings, Late Rose, Burbank.	Rose Seedlings.
4	Delaware ..	Clawson, Log Cabin..	Burbank, Early Rose, Late Rose, Rose Seedlings, Snowflake, Beauty of Hebron.	Late Rose, Rose Seedling, Burbank, Beauty of Hebron.
2	Sullivan......	....	Early Rose, Snowflake, Late Rose, Burbank.	Late Rose, Early Rose, Burbank, Radisten Seedling.
4	Lewis	Clawson...	Burbank, Early Rose, Late Rose, Red Chili, White Chili, Beauty of Hebron, St. Patrick.	Burbank, Late Rose, Red Chili, Beauty of Hebron, St. Patrick, Peerless, White Elephant.
4	Jefferson. ...	Clawson, Tredwell, Golden Drop.	Burbank, Late Rose, Snowflake, Early Ohio, Peerless, White Rose.	Burbank, Late Rose, Peerless.
8	St. Lawrence.	Clawson, White Michigan, Fultz.	Early Rose, Late Rose, Snowflake, Peerless, Beauty of Hebron, Brazee's Prolific, Ea'ly Ohio, St. Patrick, Chili, Brownell's Beauty.	Late Rose, Early Rose, Chili.

Replies to Circular No. 3, *Autumn of* 1882 — (Continued).

Number of replies received.	COUNTIES IN FIVE GROUPS.	Question 3 *c*. What varieties of wheat have been sown this autumn, naming them in order of popularity?	Question 3, *c*. What varities of potatoes constitute the main crop this year, naming them in order of popularity?	Question 2, *d*. What varieties of potatoes have succeeded best this year?
3	Franklin.....	... .	Snowflake, Early Rose, Late Rose, Brazee's Prolific, No. 2, Burbank.	Snowflake, Brazee's Prolific, Burbank.
2	Clinton	....	Early Rose, Snowflake, Peerless.	Early Rose.
2	Essex	Clawson....	Early Rose, Peachblow, Late Rose, No. 6.	Peachblow, Late Rose, No. 6.
17				

EXTRACTS FROM CORRESPONDENCE.

Niagara county. J. S. Woodward, Lockport, October: — No rain of any consequence for two months, and feed is poor. The poor corn crop, the low price for wheat, and the entire failure of the apple crop, make our farmers feel pretty poor. Not much stock is going to be fed, and consequently not much manure made.

Orleans county. U. C. Rogers, Albion, October 31: — Quinces are a good crop, and there will, I think, be more of them than of apples in this county. Beans a light yield, but quality good. Fall crops nearly all secured in good condition.

Genesee county. George W. Pratt, Batavia: — The dry weather has been very favorable for the harvesting of fall crops; the potatoes were never cleaner than the present year. There was an unusually good catch of clover in this county this season.

Monroe county. D. E. Rogers, Scottsville, October 28: — No rains from July 1 to October 1. Pastures are so much dried up that stock of all kinds are thin, especially milking stock. Slaughtering cattle are only in decent working condition. The Clawson wheat has beaten itself this year, and distanced all other varieties, yielding from 30 to 50 bushels to the acre, and very white and plump. The oat crop, threshers say, is very light. Some very late-planted potatoes are scarcely worth digging, while others in the vicinity are monstrous large and good yields.

Livingston county. B. F. Angel, Geneseo, October 31: — A severe drought began early in July, and continued until late in September. As a consequence, summer-fallows were late, and fall seeding was unusually so.

Wayne county. A. F. Sheldon, Lyons, November 4: — It seems to me that I never saw a finer showing of wheat on the ground than now. All through the county it has a fine growth; nearly every field seems to be entirely covered. Seeding on wheat stubble (clover) is excellent; I do not remember seeing it promise better.

Wayne county. George W. Marshall, Palmyra, October 28: — Clawson wheat has been sown in this section more than any other kind, owing perhaps to the good yield of this season, as well as to the fact that millers like it better than they did, and better prices are paid for it. Burbank's Seedling potatoes are likely to take the lead for at least a year or two as great yielders and of superior quality.

Ontario county. S. B. Douglass, Reed's Corners, October 28: — The season has been favorable for all small grains. Since harvest the weather has been dry, which shortened corn and potatoes, caused pastures to dry up, and also caused much extra labor in preparing ground for wheat. About September 20 there was rain, which enabled us to sow in moist ground; but the dry weather since has caused a feeble growth.

Ontario county. W. W. Wright, Geneva, October 28: — My yield of barley (six-rowed) was about 35 bushels. I think this rather below the average yield among my neighbors. Oats (white) very handsome and heavy, fully 62 bushels to the acre.

Seneca county. M. B. Ritter, Waterloo, October 28: — I have seen, this week, hundreds of acres sown to wheat, as bare as though they had not been sown. The ground being so very dry; many farmers did not sow the land that had been prepared. Fruit nearly a total failure in this county, and clover seed quite so, owing to a white worm at the root. Stock generally looking very well, considering the drought.

Seneca county. D. Willers, Jr., Varick, October 31: — The wheat crop, the barley and the oat crops harvested this year have been very fine; corn and potatoes poor; apples almost a total failure. The bean crop has been diminished by dry weather.

Yates county. J. N. Macomb, Jr., Branchport, October 31: — Grapes are yielding a rather larger crop than during past years, and the price is better, although the quality is below any former year on account of cold and backward weather. Amber cane is making quite a record for itself this year. Only small patches have been raised, but the result is so satisfactory that I look for a considerable acreage next year.

Cayuga county. E. B. Marvin, Auburn, October 28: — Owing to the unfavorable summer, corn-stalks are not large, but they are unusually well eared, and the late fall has ripened it well. The dry weather seemed to ripen up the potato crop too soon, and the result is "small potatoes" of all varieties.

Cayuga county. John J. Thomas, Union Springs, October 28: — The clover seed crop much better than last year; filled out well; but as it has not been threshed yet, I cannot say what the yield will be.

Tompkins county. Edgar Brewer, Enfield Centre, October 31: — Many farmers are raising white beans in their corn, planting between the rows, late in June, and after that working it only one way. Those who have tried it for the past two years have done well as to the crop of beans, with but little harm to the corn.

Tompkins county. H. H. Haupt, Dryden, October 30: — I think I never saw winter wheat, in this (eastern) portion of the county, look more promising than at the present time. A fair to good yield this harvest induced farmers to sow largely and to sow well, as regards fertilizers and thorough tillage.

Tompkins county. I. P. Roberts, Ithaca, Obtober 28: — Wheat failed to germinate in many places, and therefore stands thin on the ground as well as small. Unless we have something approaching a miracle, as we had this year, one-half of the crop at least will be very light. Good farming and fertile land will produce, as usual, a heavy yield, without doubt, but less than a fourth of the wheat land has been liberally dealt by. Clover does well for one crop of hay only, and will not produce seed even the first year.

Tompkins county. T. Boardman, Trumansburgh, November 3: — Farmers are, as a rule, feeling very well satisfied with results for the past year, and are hopeful of the present outlook.

Schuyler county. J. C. Call, Watkins, October 30: — Buckwheat and barley immense, splendid. Never had a nicer quality of hay or more of it. Apple crop short, but quality good.

Schuyler county. W. N. Love, Watkins, October 30: — Crops, the past season, have, as a whole, been more than an average; in fact, good, farmers generally realizing more than they expected of every thing, except apples, which are a complete failure.

Onondaga county. P. W. Ball, DeWitt Centre, October 29: — I have not seen one ton of clover hay this summer, but the spring seeding bids fair for next season. There has not been one crop of clover seed threshed in this neighborhood in five years. The potato crop on uplands this year does not generally go over 50 to 75 bushels per acre, on bottom lands 100 to 150. I raised 50 acres of barley, and have threshed 2,500 bushels, 25 acres averaged 40, the other 25 acres 60 bushels, the former corn stubble, the latter clover sod, ploughed in the fall and well cultivated in the spring.

Onondaga county. A. F. Wilcox, Manlius, October 30: — Corn has a light growth of stalk, but is eared unusually well.

Onondaga county. S. B. Wallace, Borodino, October 31: — This has been a fine year for crops generally. The corn and potato crops were shortened by the drought of July and August, but they are much better than last season, and of superior quality. Winter wheat is looking splendid. Meadows look like spring, they are so green.

Oswego county. F. C. Lander, Constantia, October 30: — The early part of the season was sufficiently moist to give every encouragement that the harvest of grain and fruit would be good, but it turned toward the middle and latter part of the season to be excessively dry. Grain, however, did very well, owing to a wet June, and hay is a quarter more than an average crop, of good quality. Buckwheat is a partial failure. Fruit, including apples, has suffered from the dry weather; apples appeared to be strung, and dropped from the trees.

Cortland county. A. B. Benham, Cortland, November 1: — We have had a remarkably fine season; crops were, on the whole, never better.

Chenango county. C. R. Frink, Norwich, November 1: — We have had a very dry season, no rain to wet the ground to any depth since July 4.

Chenango county. A. D. Harrington, Oxford, October 30:—This has been a remarkably fine autumn, not one rainy day yet. As a consequence, springs and streams are very low. All kinds of stock are high, especially dairy cows, for next season's use, good ones selling from $30 to $35.

Madison county. Button Brothers, Chittenango, November 3: — Wheat is looking pretty fair, but a little yellow from the dry weather. The potato crop is not a full one, although better than last year. The last winter killed nearly all our clover; the seeding of this year looks well.

Madison county. J. W. Goodell, Canastota, October 31: — The crop of oats and barley was unusually bulky, but on threshing, nearly every one is disappointed in the quantity of grain.

Oneida county. L. L. Wright, Whitestown, October 28: — The early summer was very wet, and pastures were so badly poached by cattle that they were very poor during the season. Hay, oats, rye, wheat, unusually good, potatoes medium, corn poor, apples scarce, prices good, and farmers doing well.

Oneida county. J. Talcott, Rome, October 30: — In my own growing of potatoes, the White Elephant and Mammoth Pearl have yielded the best of any, the Mammoth Pearl taking the lead. The White Star is one of the most valuable, I think, an excellent yielder and of first-rate quality. Potatoes are very variable this year, those grown on dry upland, such as sand or fine gravel, have been very poor, while those planted in soil more inclined to moisture have been much better in size and yield.

Oneida county. W. W. Tibbitts, Knoxborough, October 30:—We have had a light crop of corn and potatoes for two seasons. The prospect was, last spring, that we should have almost a failure in wheat and hay; the hay crop came in a good average, and wheat, where there was any thing on the ground, did finely. We had a heavy crop of oats and a good crop of barley. Apples are light in quantity and inferior in quality.

Fulton county. L. T. Marshall, Gloversville, November 2: — The season has been favorable for all crops except potatoes and fruit.

Montgomery county. Alfred DeGraff, Fonda, October 28: — This part of the Mohawk valley has been very dry since harvest, so that on many farms the ploughing for winter wheat could not well be done; consequently the amount sown is about one-third less than other seasons.

Montgomery county. H. S. Wemple, Fultonville, October 28: — Potatoes are better this fall than last, in quantity and quality. Garden vegetables suffered severely from drought. Winter grain is looking well.

Montgomery county. G. F. Mills, Fonda: — Buckwheat is good, but a light crop, and consequently brings a high price.

Otsego county. M. P. Finch, Otego, October 31: — After plenty of spring rains, giving us a splendid crop of hay, oats, wheat and barley, began a drought that has continued from about August 1, until now, materially affecting our corn, potatoes, buckwheat and root crops. It has also reduced our dairy product very much.

Schoharie county. N. Manning, Middleburgh, October 30: — Since the first of September we have not had enough rain to lay the dust, which makes our fall sowing (wheat and rye) look rather badly.

Herkimer county. George W. Pine, Herkimer, October 30: — This locality has been injured by the long drought. We have had very little fall feed. I never before knew our wells and springs to have so little water in them.

Saratoga county. C. E. Ambler, Saratoga Springs, October 31: — The season has been good for potatoes and winter grain, but not for corn. On the whole, the farmer has been well rewarded. Unusual storms of rain and hail in the early part of the summer.

Saratoga county. Seymour Gilbert, Saratoga Springs, October 30:— Early in the season, the farmers were very much discouraged on account of the dry weather, but rains came in season, and the crops were much better than expected. Fall sown grain has got an unusual growth.

Rensselaer county. Abel Merchant, Nassau, October 31: — The yield of corn is quite varied; some, planted early, was so affected by the cold and wet immediately after planting, and then by the continued drought, that it did not ear, and was cut by the 1st of September, giving merely a crop of stalks; some, planted later, as late as June 10 to 13, was well eared, four or five ears in a hill, and well ripened. The crop generally is, however, less than an average one. Early planted potatoes have done best the past season; there has been some disposition to rot, in consequence of the warm fall, but this was checked by the subsequent dryness. The crop is less than an average one.

Rensselaer county. J. I. Van Hoesen, Castleton, October 30: — Owing to the drought, rye and wheat were sown very late this fall. At the present time they look tough.

Albany county. James Hendrick, Slingerland Station, October 27: — The crops of all kinds in this part of the county are, in my judgment, quite up to the average; oats excellent, rye good, root crops of all kinds, where properly attended to, quite satisfactory. Apples a fair but not a large crop, pears very poor, plums poor, strawberries good, currants good, peaches few or none.

Albany county. H. A. Ford, Westerlo, October 31: — The remarkably fine weather has made a great difference in the corn crop, which was late. Potatoes have the same scabby skin and tendency to rot, that hurt them so much last year. The early fall was so dry that much of the rye was sown late and, but for the continuance of warm weather, would have had small chance.

Columbia county. D. W. Curtis, Canaan Centre, October 27: — Corn and potatoes were injured by drought; still the crops are fair in this neighborhood. Rye is looking very well and grass fine, for the season.

Columbia county. M. E. Williams, Chatham, October 31: — Pastures have improved greatly and the crops look well. Apple crop very short. The crop of buckwheat is a mere nothing, owing to the drought.

Greene county. W. H. Van Orden, Catskill, November 2: — I have never known so utter a failure of the corn crop about here. The dry weather came just at the critical time when the corn was setting.

Greene county. B. G. Morss, Red Falls, November 3: — The latter part of the season too dry to have a green crop or lot. We have fed our cows for three months; all green feed gone and most of the corn fodder, and we ought to have fed all the corn. Short butter crop, but good; prices lively.

Dutchess county. Henry Dodge, Beekman, October 28: — Owing to drought the corn crop is almost a failure in this vicinity. The drought broke about the time farmers should have sown their wheat, and after that they had to wait very late before sowing. Hence the poor condition of the growing crop.

Dutchess county. Martin Heermance, Rhinecliff, October 28: — The weather was too wet for corn in the early part of the season and too dry later. The potato crop suffered from the same cause. Winter wheat and rye have a good start and are looking fine.

Dutchess county. Edwin Thorne, Millbrook, October 30: — We are having a beautiful fall; pastures are the best I ever saw at this season of the year. Stock is in capital condition. Husking is going on; there is a general complaint of a good deal of soft corn, and of its all being wet and not in good condition to crib.

Orange county. C. E. Hand, Mountainville, October 29: — Seeding, this autumn, has been delayed by severe storms. In this vicinity, one of the heaviest freshets swept away fences, bridges, etc., and washed side hills severely. However, grass never looked better at this season.

Orange county. Samuel Parson, Oxford Depot, October 30: — We had a very growing time the former part of the summer, and corn, oats and grass got a good start, but the drought set in about the first of July and held on so long that corn was badly hurt. Many cut their corn and fed it to the cattle. I have a piece, that was planted late, that is good.

Orange county. H. E. Alvord, Mountainville, October 30: — Spring rye proved a successful crop this year, cut in 91 days from sowing; straw averaged four feet, grain 12 to 15 bushels per acre. Clover sown on grain in spring, and orchard grass sown with oats in April, both of which disappeared in the drought of August, are now looking well, the orchard grass particularly. Grass seed sown alone in August, a practice which is deservedly increasing in popularity, is looking very well, despite the severe washings of the terrible September rains.

Rockland county. S. B. Huested, Blauveltville, October 31: — The apple crop in this section is better than in most parts of the State, although hardly half a crop. Pastures are very fine, the frequent rains having been very favorable for all grass and grain. We have had but one frost yet, 28th; plants all alive and in bloom yet.

Westchester county. James Wood, Mount Kisco, October 30: — The remarkable drought of July and August was succeeded by copious and frequent rains in September. During October frequent light rains and mild temperature have been most beneficial in reviving grass and in causing a strong growth of winter grain. Much of the latter will need to be fed off when the ground freezes. Grass plants have not been so strong and promising at the beginning of winter in many years. First frost October 27, but not enough to kill tomato or other tender plants.

Queens county. John O'Donnell, Jamaica, October 30: — The potato crop was unusually fine as to both quality and quantity. From 250 to 300 bushels per acre have been dug; many marketed when prices were high, many farmers getting from $4.50 to $5 per barrel for the greater portion of their crop, which was sold early. The cabbage worm is hardly perceptible, the recent heavy rains having destroyed them. Cabbages very fine, rutabagas growing finely but will not be large owing to the lateness of the seed germinating. Pasture is unusually fine.

Queens county. E. G. Rave, M. D., Hicksville, October 28:—Grass (Timothy) was in average this year, very good and a large crop.

Suffolk county. A. M. Salmon, Peconic, October 28:—Cauliflowers extra fine and being marketed in enormous quantities. Corn crop much injured by drought. Potatoes promised a heavy yield early but were cut by the prolonged drought. Very early and late planted have done best. Oats damaged by the army worm are not more than half a crop.

Chautauqua county. Arad Fuller, Jamestown, November 1:—Hay was very good and secured in excellent condition; heavy crop and good quality. Oats very light. Pastures have been very good and the yield of butter large.

Chautauqua county. Owen Stoddard, Busti, October 30:—The cold, wet weather in the spring spoiled the corn crop, but with our splendid weather this fall some of it will ripen. Turnips are a heavy crop, never half so many raised here before; Sweet German the main crop. But few apples. After feed good.

Chautauqua county. Ira Porter and A. Z. Madison, Fredonia, October 30:—Cabbages, onions and turnips are a large and good crop; apples a failure, generally. Quinces turned out good, much better than the earlier appearances.

Cattaraugus county. H. S. Huntley, Little Valley, November 1:—Hay, oats, wheat, potatoes, barley, were all good crops; corn about an average; the apple crop very small. The season has been extra fine for cabbages and turnips.

Cattaraugus county. Halsey Safford, East Otto, November 1:—Corn is better than we expected in July and August; it then looked like a failure, but owing to this splendid autumn we have good corn. Grass crop splendid; oats, rust hurt them a little, not quite so heavy, but a good crop; apple crop a failure; buckwheat a good crop. For a dairy county, I must say we have had a good season.

Allegany county. William Ormiston, Cuba, November 1:—Winter wheat does not look very well, owing to the continued dry weather. When sown, the ground was so dry that only part of it came up, so the stand is thin and uneven. Potatoes are rotting badly, both before and after digging. Early sowed grain yields a fair crop, but late sowed is inferior in both quality and quantity.

Steuben county. J. L. Packer, Corning, October 30:—Wheat is looking very well, though not as large as last year at this time, owing partly to being sown later and partly to the continued dry weather. Corn is turning out better than was expected, many fields yielding double as compared with last year. Potatoes are not a good crop, and in places are rotting badly. Tobacco improved very much in the last two weeks of its growth, was housed in good condition, and is curing finely. The growers of the Chemung valley will have as good a crop to put into market as they have had for many years. The clover-root borer is playing havoc with our clover fields.

Chemung county. J. S. Holbert, Chemung, November 1: — There has been no rain, except light showers, since the fifth of July in this vicinity.

Chemung county. Jesse Owen, Chemung, October 30: — So far as our own farm is concerned "our dish has been up" all the time. We have 1,350 bushels of wheat, and 2,000 bushels of oats. Our corn is as good as we ever raised as to quality and length of ear, and will yield 150 bushels per acre. Our 40 cows (Jerseys) will give nearly or quite 275 pounds of butter per cow.

Tioga county. Robert Howell, Nichols, November 3: — A large quantity of buckwheat is grown in this vicinity; some fields have very large straw and well loaded; in more the straw is very short but sometimes well loaded; the crop three times that of last year. At this writing all small streams are dried up, and the Susquehanna river is lower than ever seen before. Apple crop lighter than for many years.

Delaware county. A. S. Gibbs, Harpersfield, October 31: — The remarkable drought has shortened crops of all kinds; oats hardly 30 bushels per acre; wheat 15; buckwheat 10, and although it is the bearing year, fruit is about as light a crop as last year.

Delaware county. I. E. Sherman, Sidney Plains, November 1: — The drought still continues; our dairymen have had less feed this fall than almost ever before, and have had to depend, almost entirely, on corn sown for fodder and on imported food, using largely the various mill feeds to keep up any flow of milk.

Sullivan county. G. W. Decker, Monticello, November 1: — Cows, on grass alone, are giving about the same quantity of milk they did a month ago. Violets and strawberry plants in bloom. Ice has formed on two occasions only. All of which is notable, as we are 1,600 feet above tide water.

Sullivan county. P. R. Pelton, Monticello, November 11: — We find that, with potatoes, early planting does not yield as well, this year, as late planting, the drought cut the crop short, but the quality is very fine. The late planted grew very fast, but the potatoes are not so dry, and rot badly.

Lewis county. B. B. Miller, Lowville, November 4: — Potatoes are an average crop, with one-quarter more planted than in former seasons. One-third of the crop of the county is in the growers' hands, and 300,000 bushels marketed in the last month at 45 to 50 cents per bushel. The Burbank yields from one-third more to twice as much as the Rose, and if it only had a red skin, would become the leading potato.

Jefferson county. Amos Goulding, Watertown, November 3: — This has been a very remarkable year for the farmer. All crops have given a good yield, and of good quality. The hop crop only was deficient.

Jefferson county. J. F. Converse, Woodville, November 1: — We have had a very warm and favorable fall for the growth of wheat; only one or two frosts up to date.

St. Lawrence county. C. A. Wooster, Hammond, October 30: — Corn has surprised all of us; the beautiful fall has made it the best crop in many years; not the largest, but the best quality. Potatoes a poor crop, in many instances almost a failure, and much complaint of rotting. Winter wheat came in finely, and as to the crop now on the ground, it never looked better.

St. Lawrence county. H. D. Leonard, Crary's Mills, October 29: — The past season has been above an average in this county for nearly all crops. I know of none except potatoes that are not all farmers could expect. Cattle are getting their own feed yet in the fields.

St. Lawrence county. A. A. Martin, Lisbon Centre, October 31: — Apples a great crop and very cheap. Splendid weather through October, but getting very dry to plough.

Franklin county. S. A. Beman, Malone, October 30: — The crops of the county this season are, on an average, good. Hops small crop but large price. The condition of the county financially never was as good.

Essex county. C. D. Sprague, Wadham's Mills, October 30: — Corn started well, but the drought, taking it just before time for it to silk, injured it very much. The drought has continued until now, and winter grain looks badly.

TABLE, showing the Mean Monthly Temperature, during the growing season (April to October) at Albany, Oswego, Rochester and Buffalo, N. Y., for nine years, 1874 *to* 1882; *the data furnished by the Chief Signal Officer of the U. S. Army.*

YEARS.	APRIL.				MAY.				JUNE.				JULY.				AUGUST.				SEPTEMBER				OCTOBER.				MEANS FOR THE SEASON.			
	Albany.	Oswego.	Rochester.	Buffalo.	Albany.	Oswego.	Rochester.	Buffalo.	Albany.	Oswego.	Rochester.	Buffalo.	Albany.	Oswego.	Rochester.	Buffalo.	Albany.	Oswego.	Rochester.	Buffalo.	Albany.	Oswego.	Rochester.	Buffalo.	Albany.	Oswego.	Rochester.	Buffalo.	Albany.	Oswego.	Rochester.	Buffalo.
1874	36.6	36.8	35.5	34.5	56.5	54.4	55.8	52.5	66.9	62.7	66.1	64.0	69.9	70.2	70.8	69.0	66.8	67.9	67.9	67.5	63.1	65.6	65.3	65.3	49.1	50.4	49.2	49.9	58.4	58.3	58.6	57.5
1875	39.1	38.9	39.0	36.7	57.3	53.3	56.2	51.8	66.9	64.9	66.4	63.9	69.8	68.2	69.3	67.5	70.7	69.2	67.6	67.0	58.5	59.0	57.8	58.0	46.5	47.7	46.2	46.7	58.4	57.3	57.5	55.9
1876	24.9	41.5	41.7	38.7	57.1	53.5	55.4	50.8	71.5	69.3	69.8	68.0	73.7	71.0	71.9	70.7	72.7	72.2	73.3	72.1	59.1	59.8	58.1	59.0	46.6	47.2	45.6	45.9	57.9	59.2	59.4	57.9
1877	40.3	44.1	45.1	43.5	57.5	54.0	56.7	53.6	68.2	65.4	66.8	64.8	71.6	71.4	72.1	70.1	71.8	71.9	71.0	71.1	63.8	64.8	63.8	63.9	49.5	53.0	51.6	51.8	60.4	60.6	61.0	59.8
1878	51.5	52.4	52.5	50.0	56.5	54.9	55.8	53.5	65.0	64.7	65.2	63.3	73.6	74.5	74.1	73.5	70.2	71.2	70.9	71.0	63.7	65.3	64.4	63.4	52.9	54.4	52.9	52.2	61.9	62.5	62.2	61.0
1879	42.0	42.8	42.1	38.6	60.8	57.8	60.0	55.5	66.0	62.8	65.5	62.9	71.1	71.1	71.9	71.7	67.9	68.3	68.3	68.1	59.6	60.2	59.4	59.5	56.1	57.1	57.6	58.3	60.5	60.0	60.7	59.2
1880	49.7	45.4	45.2	43.3	66.4	61.5	64.2	59.7	71.8	66.4	68.4	66.5	74.9	70.9	70.4	70.3	70.9	68.4	68.7	68.6	64.9	63.4	62.8	62.7	51.8	50.6	49.6	48.0	64.3	60.9	61.3	59.9
1881	47.0	40.5	41.5	36.3	64.3	57.9	61.6	56.8	65.1	58.2	61.0	59.6	73.9	70.4	71.7	70.3	73.3	71.2	71.8	71.5	71.0	70.3	71.2	71.3	55.1	52.6	52.5	54.0	64.2	60.2	61.6	60.0
1882	47.0	41.4	41.3	40.8	55.9	50.4	50.1	49.3	69.0	62.8	63.3	62.4	70.8	70.3	68.2	67.8	73.0	70.2	68.1	68.9	65.0	62.0	61.6	62.2	56.4	54.4	53.7	55.0	62.4	58.8	58.0	58.1
Means for the nine years	42.0	42.6	42.7	40.3	59.1	55.3	57.3	53.7	67.8	64.1	65.8	63.9	72.1	70.9	71.2	70.1	71.0	70.1	69.7	69.5	63.2	63.4	62.7	62.7	51.6	51.9	51.0	51.3	61.0	59.8	60.0	58.8

TABLE showing, in inches and hundreths, the rainfall during each month of the growing season (April to October) at Albany, Oswego, Rochester and Buffalo, N. Y., for nine years, 1874–1882 *: the data furnished by the Chief Signal Officer of the U. S. Army.*

YEARS.	APRIL.				MAY.				JUNE.				JULY.				AUGUST.				SEPTEMBER.				OCTOBER.				TOTALS.			
	Albany.	Oswego.	Rochester.	Buffalo.	Albany.	Oswego.	Rochester.	Buffalo.	Albany.	Oswego.	Rochester.	Buffalo.	Albany.	Oswego.	Rochester.	Buffalo.	Albany.	Oswego.	Rochester.	Buffalo.	Albany.	Oswego.	Rochester.	Buffalo.	Albany.	Oswego.	Rochester.	Buffalo.	Albany.	Oswego.	Rochester.	Buffalo.
1874	4.97	2.26	4.99	2.44	2.32	2.08	2.98	3.04	6.18	4.98	2.75	4.50	1.94	7.62	1.37	4.64	1.94	0.29	0.84	0.46	4.01	3.19	2.73	3.39	1.74	2.05	2.17	2.12	23.10	22.47	20.83	17.59
1875	3.65	2.08	1.99	1.52	2.57	3.38	2.76	3.37	3.98	3.03	3.33	2.88	2.46	3.43	2.12	3.42	6.55	2.46	5.08	3.45	2.63	4.23	2.87	4.09	5.97	3.04	2.41	3.04	27.81	21.65	20.56	21.77
1876	3.51	2.61	1.99	3.28	2.76	1.22	1.55	1.45	4.40	4.01	3.33	1.24	4.97	3.30	4.59	4.77	0.53	0.45	0.36	0.05	5.17	4.13	5.69	4.35	1.64	3.41	1.26	3.56	22.98	19.13	18.77	18.70
1877	1.42	1.66	2.67	2.24	2.77	0.51	1.20	0.53	4.00	3.33	3.16	4.86	4.00	5.89	4.42	1.85	4.57	2.19	2.98	2.95	1.82	2.83	2.31	2.55	7.86	2.37	3.06	6.17	26.44	18.81	19.80	21.15
1878	3.99	3.42	3.71	4.71	3.65	3.69	2.25	3.36	4.54	3.28	1.69	3.46	5.52	3.91	3.72	6.80	3.76	1.41	3.24	3.17	3.20	2.62	1.35	7.44	3.37	7.55	3.83	6.86	28.03	28.88	19.79	35.80
1879	3.17	0.85	1.44	1.36	0.89	1.90	1.35	1.11	4.62	3.49	3.73	2.48	5.10	3.56	4.61	2.68	4.25	3.51	3.47	3.62	3.47	2.95	2.80	2.52	1.24	1.67	0.67	0.74	22.74	17.93	18.07	14.51
1880	2.75	2.28	2.12	2.53	3.35	4.06	5.54	3.05	2.31	3.27	2.45	2.97	3.78	1.74	3.49	3.31	2.84	3.25	5.53	5.07	2.86	1.51	2.72	2.96	2.45	4.32	5.31	4.87	20.34	20.43	27.16	25.76
1881	13.40	1.19	1.15	0.76	3.90	2.41	5.86	2.18	3.76	2.98	3.20	4.15	2.22	1.73	2.20	2.17	2.07	1.69	1.14	0.85	2.38	0.76	1.82	1.21	3.19	4.61	3.33	7.33	30.92	15.37	19.30	18.65
1882	1.27	2.08	2.18	2.23	4.15	4.83	5.57	6.89	3.98	3.72	2.50	2.96	3.97	1.12	1.17	1.19	1.38	3.09	2.73	2.01	7.79	2.42	0.82	2.21	0.27	0.50	0.62	1.10	22.81	17.76	15.59	18.62
Means	4.24	2.05	2.47	2.34	2.93	2.68	3.23	2.78	4.90	3.57	2.90	2.94	3.77	3.59	3.41	3.43	3.10	2.37	2.85	2.52	3.70	2.74	2.57	3.41	3.08	3.28	2.55	3.98	25.02	20.27	19.99	21.39

TABLE showing the highest quotations of HOPS *as given in the* CULTIVATOR AND COUNTRY GENTLEMAN (Albany, N. Y.) *weekly market reports, in the month of January in each year for thirty years,* 1853–1882.

Year.	Highest price quoted in January, per lb.
1853	20 and 21 cents.
1854	45 and 48 “
1855	33 and 37 “
1856	6 and 13 “
1857	7 and 10 “
1858	5 and 8 “
1859	12 and 17 “
1860	13 and 18 “
1861	25 and 32 “
1862	16 and 25 “
1863	16 and 25 “
1864	20 and 35 “
1865	45 and 55 “
1866	25 and 65 “
1867	*35 and 65 “
1868	40 and 60 “
1869	10 and 20 “
1870	20 and 27 “
1871	†10 and 18 “
1872	‡50 and 62 “
1873	40 and 55 “
1874	25 and 45 “
1875	45 and 50 “
1876	10 and 16 “
1877	20 and 28 “
1878	8 and 12 “
1879	5 and 15 “
1880	30 and 40 “
1881	14 and 23 “
1882	20 and 30 “
Mean in thirty years	22⅓ and 34⅓ cents.

---

* An exceptional sale noted at 70 cents.

† Hops of 1870 (yearlings) were quoted in January, 1872, at 30 and 35 cents.

‡ Hops of 1871 (yearlings) were quoted in January, 1873, at 15 and 25 cents.

INDEX TO ASSEMBLY DOCUMENTS.

A.

Annual reports :
Adjutant-General 13
Auditor of canal department, financial 4
  bank department 5
  Binghamton asylum for chronic insane 22
  captain of the port 11
  central New York institution for deaf-mutes at Rome 17
  commissioners of pilots 10
  commissioners of quarantine 81
  comptroller 3
  Cooper union, receipts and expenditures of 40
  DeVeaux college for orphan and destitute children 115
  governor, of reprieves, commutations of sentences and pardons. 14
  inebriate home for Kings county 44
  institution for the improved instruction of deaf-mutes, New York 26
  insurance department, superintendent 157
  Le Cotuleux St. Mary's institute for instruction of deaf-mutes. 19
  New York infant asylum 34
  New York institution for blind 18
  New York institution for instruction deaf and dumb 32
  New York state agricultural society 143
  New York state institution for the blind at Syracuse 24
  New York state library 28
  Onondaga salt springs, superintendent 35
  public instruction and regents, relative to state normal school at Albany 27
  public instruction, superintendent 25
  public works, superintendent 9
  sailor's snug harbor 132
  state board of audit 8
  state board of health 110
  state engineer and surveyor, on companies navigating lakes and rivers 75
  state homœopathic asylum for the insane, at Middletown, New York 20

  St. Joseph's institute for improvement of deaf-mutes, Fordham New York 33
  superintendent of state prisons 12
  treasurer of board of control of the New York agricultural experiment station 71
  trustees of the charity organization, society of Buffalo 16
  trustees of New York asylum for idiots 23
  trustees, Oswego city library 48
  trustees of Willard asylum for the insane 21
  western New York institution for deaf-mutes 30
Adjutant-General, report of 13
  communication from, relative to appropriations for national guard 63
Apportionment, protest of minority of committee on 61
Assembly:
  joint rules of senate and 7
  list of members 1
  list of members, officers and reporters 77
  rules and orders of 6
  standing committees of 37
Asylums, investigation of, report of committee 175
Attorney-General, report of, relative to certain insurance receivers 126
  communication from, relative to expenses of his office 43
Audit, annual report of state board of 8
Auditor canal department, report of, relative to expenditures on canals 10

B.

Bank department, annual report of superintendent of 5
Battery park, communication relative to 39
Bills for reference to sub-committee of the whole, 60, 69, 92, 95, 103, 108, 112, 118, 141, 145, 156, 167
Binghamton asylum for chronic insane, annual report of 22
Blackwell's island penitentiary, report of warden of 58
Board of commissioners of pilots, annual report of 10
Board of control, New York experiment station, report of 98
Board of regents, report of 15

C.

Canals, tolls, trade and tonnage, statistics, report of 136
Canal department, auditor's report 4
Capital commissioners, report of, in reply to resolution of January 17, 1883 38
Captain of the port, annual report of 11
Central labor union, communication from 86
Central New York institution for deaf-mutes, at Rome, annual report of 17
Chamber of commerce, New York, memorial of 90
Commissioners on boundary line between New York, Pennsylvania and New Jersey, report of 161

Commissioners of land office, resolutions of 53
  memorial of 89
Commissioner in lunacy, report of 172
Commissioners to revise laws relative to city of New York, communication from 87
Commissioners of quarantine, annual report of 81
Committee on agriculture, report of 130
Committee on insurance, report of 166
Committee on prisons, majority report 121
  minority report 122
Committee on privileges and elections, report of, in matter Van Voast v. Derrick 116
  report of, in matter Greenwood v. Hotchkiss 117
Committee on public education, report of 165
Communications from
  adjutant-general, relative to appropriations for national guard 63
  attorney-general, relative to commissioners of emigration 31
  attorney-general, in reply to resolution of January 23, 1883, relative to expenses of his office 43
  attorney-general, relative to insurance receiverships 126
  board of aldermen of city of New York 68
  capitol commissioners in reply to resolution, January 17, 1883. 38
  central labor union 86
  commissioners of land office, transmitting a resolution of board of 53
  commissioners to revise laws relative to city of New York 87
  comptroller, relative to legislative printing 74
  comptroller, relative to common school funds 88
  comptroller, relative to use of canal lands by New York and West Shore railroad 125
  comptroller, relative to expenses of legislative committees 164
  comptroller of city of New York, relative to expenditures for pipe line and water supply 154
  counsel of corporation of city of New York, relative to battery park encroachment 39
  counsel to corporation city of New York, relative to Hudson river railroad 97
  counsel to corporation city of New York in reply to resolution of March 27, 1883 153
  land commissioners, relative to grants of land under water in New York and Kings county 82
  mayor of city of New York, in reply to resolution of January 10, 1883 82
  Onondaga salt springs company, in reply to resolution of assembly 80
  state engineer and surveyor relative to encroachments by New York and West Shore railroad 101
  state treasurer, relative to expenses of his office 50
  superintendent bank department, in reply to resolution of January 23, 1883 41
  superintendent bank department, relative to market savings bank 109

Communications from
  superintendent Erie county penitentiary in reply to resolution of assembly 83
  superintendent insurance department, relative to expenses of his office 46
  superintendent state prisons, in reply to resolution of January 11, 1883 29
  superintendent state prisons, in reply to resolution of January 18, 1883. 36
  superintendent public instruction, relative to expenses of his office.......... 45
Comptroller, annual report of.......... 3
Comptroller, report of, relative to legislative and department printing.......... 74
Comptroller, communication relative to common school fund ... 88
Comptroller, report of, relative to collectors of canal tolls....... 142
Comptroller, statement by, relative to lands exempt from taxation 135
Comptroller, report of, as to state funds, number and designation, 147
Cooper union, annual report 40

D.

DeVeaux college for orphan and destitute children, annual report of 115

E.

Eclectic medical society, report of transactions of.......... 176

G.

General orders 42, 49, 56, 59, 64, 72, 76, 79, 85, 93, 94, 102, 105, 113, 119, 120, 127, 128, 129, 134, 137, 138, 140, 149, 150, 152, 158, 160, 170
Governor, annual message of.......... 2
Governor, report of reprieves, commutations of sentences and pardons 14

I.

Inebriate home for Kings county, annual report of 44
Institution for the improved instruction of deaf-mutes, New York, annual report of.......... 26
Insurance, report of committee on.......... 166

J.

Joint rules of senate and assembly.......... 7

K.

Kings county penitentiary, report warden of 62

L.

Le Couteulx St. Mary's institution for deaf-mutes, report 19
List of bills for reference, sub committee of the whole.... 60, 69, 92, 95, 103, 108, 112, 118, 141, 145, 156, 167
List of members 1
List of standing committees 37
List of members, officers and reporters....... 77

M.

Majority report, committee on privileges and elections, Sprague v. Bliss.. ... 78
Mayor of city of New York, report of, in reply to resolution of assembly 82
Memorial, commissioners of the land office...................... 89
    chamber of commerce, New York........................ 90
Minority report, committee on privileges and elections, Sprague v. Bliss 78

N.

New York agricultural experiment station, annual report of treasurer of.. 71
New York infant asylum, annual report of 34
New York institution for the blind, annual report of managers of, 18
New York institution for instruction deaf and dumb, annual report of.. 32
New York state institution for the blind, at Syracuse, annual report of........... 24
Niagara Falls, petition of citizens of New York, relative to 47

O.

Onondaga salt springs company, report of, in reply to resolution. 80

P.

Petition of citizens of New York relative to Niagara Falls 47
Poppenhausen institute, report of............................ 52
Protest of minority committee on apportionment........... 61
Public education, report of committee on.................. 165

R.

Railroad commission, report of, relative to Manhattan railroad, 96
Railroad commissioners, report of, in reply to resolution of March 17, 1883 162
Reports :
    attorney-general, in reply to resolution of inquiry as to certain insurance receiverships................................ 126
    auditor canal department, relative to expenditures on canals.. 107
    Blackwell's Island penitentiary, warden.................. 58

Reports — (Continued).
  board of control, New York experiment station 98
  board of regents, as to vacancy in 15
  canals, statistics of 136
  capitol commissioners in reply to resolution of January 17, 1883 38
  commissioners on boundary line between New York, Pennsylvania and New Jersey 161
  commissioners in lunacy 172
  committee on agriculture, in reply to resolution 130
  committee on insurance 166
  committee on privileges and elections, majority and minority, in matter of contested seat, Sprague v. Bliss 78
  committee on privileges and elections, in the matter of contested seat, VanVoast v. Derrick 116
  committee on privileges and elections, in the matter of contested seat, Greenwood v. Hotchkiss 117
  committee on public education 165
  committee, special, relative to senate bill, Int. No. 100 168
  committee, special, relative to senate bill, Int. No. 100 169
  committee on state charitable institutions in matter of asylum investigation 75
  comptroller, in reply to resolution, February 5, 1883 74
  comptroller, relative to collectors of canal tolls 124
  comptroller, relative to alleged occupation of canal lands by New York and West Shore road 125
  comptroller of lands exempt from taxation 135
  comptroller in reply to resolution 147
  comptroller in reply to resolution 154
  Conrad Poppenhausen association for the advancement of knowledge 52
  counsel to the corporation of city of New York 67
  counsel to the corporation of the city of New York in reply to resolution, March 27, 1883 153
  eclectic medical society 176
  Erie county penitentiary, superintendent 83
  Kings county penitentiary, warden 62
  land commissioners, in reply to resolution 100
  majority committee on prisons 121
  mayor of city of New York, in reply to resolution of January 10, 1883 82
  minority committee on prisons 122
  Monroe county penitentiary, superintendent 57
  Onondaga salt springs company, in reply to resolution of February 15, 1883 80
  railroad commission relative to Manhattan railroad 96
  railroad commission, in reply to resolution of March 17, 1883. 162
  state engineer and surveyor on lands sold and owned by the state 91
  state engineer and surveyor in reply to resolution 101
  state survey 148
  sub-committee of the whole 54, 65, 73, 84, 99, 104, 111, 123, 131, 133, 139, 144, 146, 151, 155, 159, 163, 171, 173, 174

Reports — (Continued).
superintendent bank department in reply to resolution of assembly, January 23, 1883 ... 41
superintendent bank department relative to savings banks .. 70
superintendent insurance department in reply to resolution, 114
superintendent of public works, in reply to resolution relative to canal lands for railroad purposes ... 106
superintendent of state prisons in reply to resolution of January 11, 1883 ... 29
superintendent of state prisons in reply to resolution January 18, 1883 ... 36
trustees Wadsworth library ... 54
tolls, trade and tonnage ... 142
Resolutions relative to the ocean carrying trade ... 66

S.

Sailors' snug harbor, annual report of ... 132
State agricultural society, annual report of ... 143
State board of audit, annual report of ... 8
State board of health, annual report of ... 110
State charitable institutions report of committee on ... 175
State engineer and surveyor, annual report of, on companies navigating lakes and rivers ... 75
State engineer and surveyor, report of on lands sold and owned by state ... 91
State engineer and surveyor, report of relative, to encroachments by New York and West Shore Railroad Co ... 101
State homœopathic asylum for the insane, at Middletown, annual report of ... 20
St. Joseph's institute for improvement of deaf-mutes, Fordham, annual report of ... 33
State survey, report of ... 148
State treasurer, communication from, relative to expenses of his office ... 50
Sub-committee of the whole, reports ... 54, 65, 73, 84, 99, 104, 111, 123, 131, 133, 139, 144, 146, 151, 155, 159, 163, 171, 173, 174
Superintendent bank department, annual report of ... 5
Superintendent bank department, report of, in reply to resolution of January 23, 1883 ... 41
Superintendent bank department, report of, relative to savings banks ... 70
Superintendent bank department, communication relative to Market savings bank ... 109
Superintendent Erie county penitentiary, report of, in reply to resolution ... 38
Superintendent insurance department, communication from, relative to expenses of his office ... 46
Superintendent of insurance, report of, relative to payments to policyholders of certain companies ... 114
Superintendent insurance department, annual report of ... 157
Superintendent Monroe county penitentiary, report of ... 57

Superintendent Onondaga salt springs, annual report of........ 35
Superintendent public instruction, annual report of............ 25
Superintendent public instruction communication from, relative to expenses of his office.................................... 45
Superintendent of public instruction and regents of university on State Normal School at Albany, annual report of............ 27
Superintendent public works, report of........................ 9
Superintendent of public works, report of, relative to canal lands for railroad purposes...................................... 106
Superintendent state prisons, annual report of.................. 12
Superintendent of state prisons, report of, in reply to resolution of January 11, 1883.................................... 29
Superintendent state prisons, report of, in reply to resolution of January 18, 1883.................................... 36

T.

Tolls, trade and tonnage, report, auditor of canals on........... 142
Trustees of the charity organization society of Buffalo, annual report of... 16
Trustees New York asylum for idiots, Syracuse, annual report of. 23
Trustees of New York State library, annual report of........... 28
Trustees Oswego city library, annual report of.............. .. 48
Trustees Wadsworth library, report of........................ 54
Trustees Willard asylum for the insane, annual report of....... 21

W.

Wadsworth library, report of trustees of...................... 54
Western New York institution for deaf-mutes, annual report of. 30

3 0112 105560145